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MARINE CORPS AIR STATION  
BEAUFORT, SOUTH CAROLINA 29904-5001

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SC DHEC - Bureau of  
Land & Waste Management

SCDHEC-BLWM

Attn: Lisa Appel

2600 Bull Street

Columbia, South Carolina 29201

Dear Ms. Appel:

Subject: Draft Final Memorandum Per- and Polyfluoroalkyl  
Substances Preliminary Assessment - Areas Recommended  
for NFA, MCAS Beaufort, Beaufort, South Carolina

As per South Carolina R.61-79.270.11 and 270.30(k), I certify under penalty of law that the above-subject report and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,

Christopher L. Vaigneur  
Natural Resources and  
Environmental Affairs Officer  
By Direction of the  
Commanding Officer

**VERIFIED**  
**SCANNED**  
7-9-19 sat  
7/9/19 mm. (49)

# TRANSMITTAL

**TO: South Carolina**  
**Department of Health and Environmental Control**

**DATE:** July 8, 2019

Division of Waste Management

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**ATTENTION:** Ms. Lisa Appel

**SUBJECT SITE:** Installation Wide  
Marine Corps Air Station Beaufort  
Beaufort, South Carolina

**SUBMITTED HEREWITH:** Draft Final Per- and Polyfluoroalkyl Substances  
Preliminary Assessment  
Areas Recommended for NFA  
Marine Corps Air Station Beaufort  
Beaufort, South Carolina

Ms. Appel,

Please find attached two (2) copies of the above referenced document (hardcopy and e-file) for your review and comment.

Should you have questions or comments regarding this submittal, please contact Megan Clark (843-302-8720) or Shawn Dolan (843-302-8725).

Thank you,

Shawn

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**DRAFT FINAL  
PER- AND POLYFLUOROALKYL SUBSTANCES  
PRELIMINARY ASSESSMENT  
AREAS RECOMMENDED FOR NFA  
MARINE CORPS AIR STATION BEAUFORT  
BEAUFORT, SOUTH CAROLINA**

**Revision: 0  
Prepared for:**



**Department of the Navy  
Naval Facilities Engineering Command, Mid-Atlantic  
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Norfolk, Virginia 23511-3095**

**July 2019**

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PRELIMINARY ASSESSMENT  
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**Prepared by:**



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**Contract Number: N62470-14-D-9016**

**CTO 18F4605**

**July 2019**



# Draft Final Memorandum

Date: July 8, 2019  
To: Ms. Lisa Appel, SCDHEC – Project Manager  
From: Shawn Dolan, PG, CDM-AECOM – Project Manager  
Elizabeth Maurer, CDM-AECOM – Project Geologist  
Contract No.: N62470-14-D-9016, CTO 18F4605  
Subject: Per- and Polyfluoroalkyl Substances Preliminary Assessment  
Areas Recommended for NFA, MCAS Beaufort  
Distribution: Bryan Beck, NAVFAC MIDLANT – Project Manager  
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## 1. INTRODUCTION

The purpose of this technical memorandum (memo) is to present information compiled as part of a site wide Preliminary Assessment (PA) of per- and polyfluoroalkyl substances (PFAS) at the Marine Corps Air Station (MCAS) Beaufort, South Carolina. This work has been awarded under Contract Task Order (CTO) N4008518F4605 of the Indefinite Delivery, Indefinite Quantity (IDIQ) Multimedia Environmental Compliance Contract (Contract No. N62470-14-D-9016).

Research and investigations to support this document began in April 2018 and extended through March 2019. A records search was initiated in April 2018, during which time AECOM conducted a record review and interviewed MCAS Beaufort personnel to document historic and current fire training exercises, historic and current use of aqueous film-forming foam (AFFF) containing PFAS, and potential use and storage of other materials containing PFAS.

As a result of these efforts, 24 areas within MCAS Beaufort are recommended for no further action (NFA) based on a lack of evidence regarding the presence or release of materials containing PFAS. Site-specific conceptual site models (CSMs) for each area/building recommended for NFA are presented in this memo. Table 1 provides a comprehensive list of areas suggested for NFA with key elements of each CSM, including details on the potential source for PFAS contamination, years of operation, and justification for NFA recommendation. Figure 1 provides a plan view of MCAS Beaufort with these areas shown.

Thirty-two areas/buildings have been identified to consider for assessment of PFAS impacts. CSMs for areas recommended for assessment are presented in the forthcoming Per- and Polyfluoroalkyl Substance Preliminary Assessment (PA) Report prepared by CDM-AECOM.

## 1.1 PA OBJECTIVES

The MCAS Beaufort PA for PFAS is part of a Navy-wide Installations assessment of potential historical sources of PFAS. The objectives of this PFAS PA of MCAS Beaufort are to:

- Identify and catalog all potential or actual PFAS sources (see list below),
- Eliminate from further consideration those areas where there is no evidence of a PFAS release or suspected release and document the rationale for their elimination (presented in this memorandum),
- Identify areas requiring further PFAS investigation,
- Identify receptors and migration pathways (both on and off the facility),
- Determine whether an emergency response action is warranted because of current complete exposure pathways (e.g. on-Base or off-Base drinking water source within one-mile downgradient of potential source area), and
- Set priorities for a base-wide Site Inspection (SI).

To accomplish these objectives, the following activities have been completed:

- A review of existing information to identify and characterize potential PFAS releases.
- A review of existing information to identify potential off-base receptors within 1 mile of the facility boundary (note that this is less extensive than the study area defined in USEPA's PA Guidance, but will be expanded if necessary in later project phases if complete pathways beyond 1 mile are identified).
- Interviews with relevant site personnel to validate and verify data collected during the data review, and to provide supplemental information.
- A site reconnaissance of the facility to identify any evidence of PFAS releases and potential receptors and migration pathways, to identify all areas of concern, and to fill data gaps identified in the data review and interviews.
- Identify any need for initiation of a rapid response drinking water investigation in accordance with Navy policy (DASN June 2016).

## 1.2 PFAS BACKGROUND

PFAS have been identified by the U.S. Department of Defense (DoD) and the United States Environmental Protection Agency (USEPA) as “emerging contaminants”. Emerging

contaminants can be broadly defined as a contaminant that: has a reasonably possible pathway to enter the environment; presents a potential unacceptable human health or environmental risk; and does not have regulatory standards based on peer-reviewed science, or the regulatory standards are evolving due to new science, detection capabilities, or pathways (DoD, 2009). PFAS are of environmental concern because of their persistence in the environment and in organisms, their migration potential in aqueous systems (e.g., groundwater), their historically widespread use in commercial products, and their possible health effects at low levels of exposure. PFAS are anthropogenic compounds with multiple strong carbon-fluorine bonds.

### **1.2.1 GENERAL USES OF PFAS**

The chemical properties of PFAS make them useful for many commercial products because they are heat resistant and can repel oil, grease, and water. PFAS have been manufactured for use in a wide variety of products including fire-fighting foam, non-stick cookware, fiber and fabric stain protection, food packaging, and personal care products. The pervasive use of PFAS in commercial and industrial products has led to the discovery of PFAS in soil, air, and groundwater worldwide.

### **1.2.2 KEY PFAS SOURCES AT NAVAL INSTALLATIONS**

PFAS have been used in a variety of military applications, including as a component of AFFF, which was routinely used at fire-fighting training areas (FTAs) and firefighting equipment test areas. In addition, current and historical AFFF storage and transfer areas are of potential concern for release to the environment. As such, identification of areas where AFFF was released to the environment, either as repeated small releases or as a significant one-time release, is key to determining potential PFAS sources to environmental media.

PFAS from AFFF used in firefighting, firefighting training, and fire suppression systems are considered to have the greatest potential for release of PFAS to the environment in terms of mass/concentration at DON installations. Other potential sources of PFAS to the environment include operations wastes (e.g., from chromium electroplating), historical on-site land disposal areas/landfills of PFAS-containing materials, waste water treatment sludges and effluents, etc. Areas of interest for this PFAS PA include those where AFFF may have been applied, released, or stored. These include current and former fire training areas, equipment test and cleanout areas, buildings with fire-fighting infrastructure (e.g., hangars, AFFF storage/handling areas, pump houses, etc.), unplanned release areas (e.g., crash sites), and fire suppression systems located at fuel storage area(s).

### **AFFF IN FIRE-FIGHTING TRAINING AND FIRE SUPPRESSION**

AFFF containing PFAS was developed in the 1960s for use on Class B fires (i.e., fires in flammable liquids or vapors), and was put into routine use by the early 1970s. In November 1969, a military specification (MIL SPEC) was issued that described characteristics which AFFF needed to demonstrate in order to be used by the military, including a requirement for formulations containing PFAS. As such most AFFF used at military installations after the 1970's likely included some combination of PFAS.

Typically, AFFF concentrate was proportionally mixed into water lines using in-line eductors or other proportioning devices to create the necessary foam solution ranging from 3% to 6% of the concentrate. Class A fire-fighting foams were used to extinguish wood and grass fires, and do not contain PFAS. Therefore, Class A fire-fighting foams are not a concern for this investigation.

### **ELECTROPLATING**

Electroplating, specifically hard chromium plating, is an industrial activity where PFAS-containing mist suppressants may have been used. Electroplating consists of creating an electrolytic cell that enables a thin layer of metal to be deposited onto an electrically conductive metal surface. PFAS were sometimes used during the chromium electroplating process as a surfactant in chromic acid baths. As a surfactant, PFAS lowered the surface tension (adhesion of materials) by creating a thin, foamy layer on the surface of the chrome bath for mist-suppression. This mist-suppressant reduced the formation of airborne chromium aerosols during the plating process, which are known to be carcinogenic and allergenic. Areas where non-chromium electroplating operations were carried out would not be expected to have used PFAS-containing mist suppressants.

At MCAS Beaufort, former electroplating operations included cadmium plating. According to the MCAS Environmental Compliance Supervisor and the Installation Restoration (IR)/Underground Storage Tank (UST) Manager, chrome plating was not utilized in electroplating operations on site (Attachment F). Currently, chrome, copper, nickel and tin electroplating processes are identified as utilizing PFAS containing materials (ITRC, 2017). Therefore, the cadmium plating operations at MCAS Beaufort were not included in this PA.

### **LANDFILL OPERATIONS, WASTE DISPOSAL AREAS, AND WASTEWATER TREATMENT PLANTS**

Historically, landfills received wastes generated from military installations, including waste streams from operational areas (machine shops, electroplating operations, etc.), housing areas,

and waste from wastewater treatment plants (WWTPs) and/or homeported ships. These waste streams may contain industrial and/or consumer products that were either manufactured with PFAS or contain PFAS constituents which may leach out of the landfill. Additionally, waste material biosolids and sludge from WWTPs can contain PFAS.

### **SPILL RESPONSE AND VAPOR SUPPRESSION**

Applying AFFF to fuel spills reduces volatilization of the fuels and decreases the risk of ignition. According to site personnel this practice has been used at MCAS Beaufort for fuel spills that posed a potential risk to MCAS Beaufort personnel and assets.

### **OTHER POTENTIAL SOURCES**

Due to the widespread use of PFAS, there may be activities other than the ones mentioned above where PFAS were used. PFAS have been included in some anti-fouling and stain-resistant paint formulations. It is possible that in significant amounts, these could be sources of PFAS to the environment.

#### **1.2.3 PFAS IN THE ENVIRONMENT**

PFAS are a class of anthropogenic compounds characterized by carbon chains of varying lengths containing carbon-fluorine bonds. The strong electronegative force of the carbon-fluorine bond requires a large amount of energy to break, which makes PFAS extremely resistant to biodegradation, photo-oxidation, direct photolysis, and hydrolysis. In addition to their environmental persistence, PFAS are readily soluble in aqueous solution and therefore have potential for migration to groundwater from soil and with groundwater flow to off-site locations. Due to their persistence and mobility, releases of PFAS to the environment present a unique set of challenges and concerns.

#### **1.2.4 POTENTIAL HEALTH EFFECTS**

Additional research is needed to more clearly understand the potential health effects that may be caused by exposure to PFAS compounds. To date there is limited information on only a few out of the thousands of total PFAS. To date, there are no Tier 1 toxicity values for any PFAS. Tier 1 toxicity values are the preferred source for toxicity factors in Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Resource Conservation and Recovery Act (RCRA) human health risk assessments.

The USEPA's Superfund Health Risk Technical Support Center has estimated a Tier 2 noncarcinogenic toxicity value for PFBS (USEPA, 2014). The oral reference dose (RfD) is

based on kidney effects observed in female rats. Due to a lack of information in the current literature, toxicity values for inhalation exposure and cancer endpoints could not be estimated for perfluorobutane sulfonate (PFBS).

The USEPA Office of Water developed an RfD for perfluorooctanoic acid (PFOA) which is based on a developmental toxicity study using mice. The critical effects included reduced ossification in parts of the hand/feet and accelerated puberty in male pups following exposure during gestation and lactation (EPA, 2016a). The EPA Office of Water also determined that PFOA should be classified as “suggestive evidence of carcinogenic potential” and estimated an oral cancer slope factor (CSF) based on tumor development in rat testes.

The EPA Office of Water estimated an RfD for perfluorooctane sulfonate (PFOS) based on a developmental toxicity study in rats; the critical effect was decreased pup body weight following exposure during gestation and lactation (EPA, 2016b).

PFOA and PFOS are known to be transmitted to the fetus in cord blood and to the newborn in breast milk. Because the developing fetus and newborn seem particularly sensitive to PFOA- and PFOS-induced toxicity, the RfDs based on developmental effects are also protective of adverse effects in adults.

## **1.3 REGULATORY BACKGROUND/HISTORY**

### **1.3.1 PFOA STEWARDSHIP PROGRAM**

In 2006, USEPA initiated the 2010/2015 PFOA Stewardship Program in which eight major companies in the United States committed to reduce facility emissions and product contents of PFOA and related chemicals on a global basis by 95% no later than 2010, and to work toward eliminating emissions and product content of these chemicals by 2015. All companies have met the program goals. To meet the program goals, most companies stopped the manufacture and import of long-chained PFAS, and transitioned to alternative chemicals. On January 21, 2015, USEPA proposed a Significant New Use Rule under the Toxics Substances Control Act to require manufacturers (including importers) of PFOA- and PFOA-related chemicals to notify USEPA at least 90 days before starting or resuming new uses of these chemicals in any process.

### 1.3.2 UNREGULATED CONTAMINANT MONITORING RULE (UCMR)

The USEPA issued the Third Unregulated Contaminant Monitoring Rule (UCMR3)<sup>1</sup> in May 2012. The UCMR3 required monitoring, between 2013 and 2015, for 30 substances at all large public water systems (PWSs) serving more than 10,000 people and 800 representative PWSs serving 10,000 or fewer people. Six PFAS compounds were included in the UCMR3 contaminant list. Of these 6 PFAS, USEPA issued health advisory levels for only two, PFOA and PFOS. The UCMR3 results found these two chemicals were present in less than 1% of the nearly 5,000 public water systems that sampled per UCMR3.

In December 2016, USEPA issued the fourth Unregulated Contaminant Monitoring Rule (UCMR4). UCMR4 requires all large PWSs serving more than 10,000 people and 800 representative PWSs serving 10,000 or fewer people to sample for 30 chemicals between 2018 and 2020. There are no PFAS included on the UCMR4 list of contaminants that require sampling and analysis.

### 1.3.3 EPA LIFETIME HEALTH ADVISORIES

In May 2016 the USEPA Office of Water issued a drinking water lifetime health advisory for PFOA and PFOS. Health advisories are not enforceable, regulatory levels; rather they are levels that would provide Americans, including sensitive populations, with a margin of protection from a lifetime of exposure to PFOA and PFOS from drinking water. The health advisory is 70 parts per trillion (ppt) for PFOA and 70 ppt for PFOS. When both PFOA and PFOS are found in drinking water, the combined concentrations of PFOA and PFOS should be compared with the 70 ppt health advisory level.

## 2. INVESTIGATION SUMMARY

This section provides a description of the activities conducted as part of this investigation. AECOM conducted a records search and document review to identify and evaluate sites across MCAS Beaufort where PFAS may have been historically used, stored, disposed of, and/or released. Interviews with environmental, fire and maintenance personnel were completed to verify existing knowledge and to identify additional locations of potential PFAS-related areas.

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<sup>1</sup> The 1996 Safe Drinking Water Act (SDWA) amendments require that once every five years EPA issue a new list of no more than 30 unregulated contaminants to be monitored by public water systems (PWSs).



## **2.1 REVIEW OF RECORDS**

A records review was initiated in March 2018 and included using the Internet to obtain reports, news articles, historical images and other available information to aid in documenting the use, storage, disposal and release of PFAS containing materials at MCAS Beaufort. Additionally, the Internet was utilized to obtain information regarding drinking water and the environmental setting at MCAS Beaufort and the surrounding area. Searches were conducted using the Navy's Administrative Record (AR), EDR, AECOM archives, and general search engine. In addition, documents provided by MCAS personnel were reviewed and are included in Attachments A through F. A summary of the research is included below.

### **2.1.1 NAVY ADMINISTRATIVE RECORD**

The online Navy AR was utilized to obtain documents regarding environmental testing and sampling conducted at MCAS Beaufort. A total of 2,076 documents were available for review, including 937 reports. An assessment of the documents available on the Navy AR was conducted to evaluate potential areas where PFAS containing materials may have been used, stored, disposed or released.

The Initial Assessment Study (IAS) (Dames and Moore, 1986) and the RCRA Facility Assessment Report (A.T. Kearney, Inc., 1986) provided general background information (e.g., site history, setting, and facility operations) for existing RCRA sites (SWMUs and AOCs) located within MCAS Beaufort. Site specific reports from the Navy AR were reviewed to gather general background information for SWMUs and AOCs that were identified after the completion of the IAS in 1986. Additionally, the Navy AR was searched using the keywords crash, fire, AFFF and foam.

A more thorough document review of site specific reports was performed for sites where PFAS impacts were suspected based on general background information. The reports available for review included RCRA Facility Investigation reports, groundwater and soil sampling reports, Tier I and II Assessment reports, Corrective Measure Study reports, Remedial Investigation reports, various work plans, Phase I and II reports, Statement of Basis reports, etc.

### **2.1.2 ENVIRONMENTAL DATA RESOURCES, INC.**

Two EDR reports for SWMU 12, and SWMU 13, SWMU 36 and UXO 3 were prepared as part of DASN (E) Policy Memo, 20 June 2016. AECOM reviewed these reports to collect information regarding drinking water sources within one-mile of potential PFAS release areas.



### 2.1.3 AECOM ARCHIVES

AECOM archive documents include previously conducted environmental assessments and investigative reports that are not currently available on the Navy AR. A review of these reports was conducted to identify historical activities and operations at the site. Documents from the AECOM archives provided general background information for areas of known or suspected use, storage or release of PFAS containing materials.

### 2.1.4 GENERAL SEARCH ENGINE

A general search engine was utilized to search the Internet for the following keywords in combination with MCAS Beaufort: fire, crash, plane crash, accident, aqueous film forming foam, foam, and AFFF. The search yielded news articles with information pertaining to fires and crashes where MCAS Beaufort was involved in the emergency response efforts.

The search engine was also utilized to obtain historical aerial photographs, maps pertinent to the environmental setting and drinking water sources. The University of South Carolina Thomas Cooper Library Maps Department was utilized to obtain historical aerial photographs dating back to 1939. The U.S. Fish and Wildlife Service website was utilized to obtain wetland maps and critical habitat maps, and the Federal Emergency Management Act website was utilized to obtain floodplain maps. The South Carolina Department of Natural Resources water well inventory was utilized to obtain information about drinking water supplies within one-mile of suspected PFAS release areas. The map search function of the general search engine was utilized to identify schools and daycares within one-mile of MCAS Beaufort.

### 2.1.5 ADDITIONAL DOCUMENTS

Site personnel provided additional documents regarding the use, storage, disposal and release of AFFF at MCAS Beaufort. The following documents provided by site personnel were reviewed by AECOM, and are provided in Appendices A through E, respectively:

- AFFF Inventory summarizing AFFF installed in fire suppression systems and trucks, and containerized AFFF stored in warehouses. The inventory includes quantities of AFFF at each location and contact information for the managers of the locations (Attachment A).
- AFFF Spill Reports dating back to 2014. The reports outline details about the release including date and time, location, personnel involved, description of the release, estimated volume of AFFF released, cause of release and corrective action (Attachment B).

- MCAS Beaufort General Development Map showing the current layout of the base including buildings, runways, roads and water features (Attachment C).
- AFFF Waste Disposal Manifests including manifests for bulk disposal and a summary table for non-bulk disposal (Attachment D).
- Fire response narrative for the 2019 fire response (Attachment E).

## 2.2 SITE INTERVIEWS

AECOM conducted interviews with persons familiar with the installation to document their knowledge of former and current use, handling, storage or releases of PFAS containing materials at MCAS Beaufort. A summary of the interviews is provided below, and records of these interviews, phone calls and electronic mail exchanges with Site personnel are available in the communication logs in Attachment F.

On May 9, 2018 AECOM conducted in person interviews with an ARFF employee, the MCAS Beaufort Environmental Compliance Supervisor, and the MCAS Installation Restoration (IR)/Underground Storage Tank (UST) manager. AECOM conducted telephone interviews with the following personnel:

- Fire Department Chief (May 23, 2018),
- Public Works Engineering Director (July 13, 2018),
- Hazardous Materials Manager (February 12, 2019),
- Lead Fire Inspector on (February 15, 2019),
- ARFF Admin Chief (March 5, 2019),
- ARFF Material Chief (March 6, 2019),
- Site Safety Manager, Building 617 (March 11, 2019), and
- Safety and Environmental Non-Commissioned Officer (March 13, 2019).

Additional information, follow up questions and requests for supporting documents were exchanged via electronic-mail between AECOM and the following personnel:

- ARFF Fire Chief (May 23, 2018),
- Environmental Compliance Supervisor (May 22 and 24, 2018 and February 28, 2019),
- Fire Department Chief (June 21, 2018),
- Utilities Director (February 28, 2019),

- Environmental Engineer (February 28, 2019), and
- IR/UST Manager (March 1 and 28, 2019).

Following the initial round of interviews, the Environmental Compliance Supervisor provided AFFF spill, storage and disposal records, and a facility map via electronic-mail. The ARFF Admin Chief provided the fire response narrative for the 2019 incident via electronic email.

## 2.3 SITE WALK

Site walks were conducted over the course of the investigation to inspect certain areas identified during the literature review, records search and interview process. On May 9, 2018 sites accessible without special clearance were inspected, including temporary waste storage areas, former landfills and former disposal areas. Additionally, AECOM was escorted by an ARFF employee to perform site walks at the current FTA and the ARFF Station (Building 1313). On March 12, 2019 AECOM performed site walks at AFFF storage locations to gather information regarding general housekeeping and storage practices.

Information gathered during site walks was used to evaluate the potential for release of PFAS containing materials and to aid in recommending a path forward for the area. Information gained during the site walks is presented in the site-specific CSMs.

## 3. AREAS RECOMMENDED FOR NO FURTHER ACTION

Based on a review of site documents, numerous areas were identified where PFAS were potentially used, stored, disposed, and/or released at MCAS Beaufort. These identified areas were further evaluated through site interviews and a more thorough document review to recommend a path forward. Sites were recommended for NFA based on history of use and lack of evidence regarding the release or presence of materials containing PFAS. Additionally, Navy guidance specifies that the following areas should be classified as NFA:

- Fires where it is known that AFFF was not used;
- Sites where releases of fire-fighting foam (such as ox blood foam), paints, pesticides, or cleaners were released before 1960;
- Areas where pesticides, cleaners, or paints were used for their intended purposes;
- Car washes and auto hobby shops; and
- Active ranges.

As a result of the assessment, 17 of the identified sites are recommended for NFA. The following section is organized by site and presents the CSM for each area recommended for NFA. Table 1 summarizes this information and provides a recommended path forward. Figure 1

illustrates the location of each area identified on MCAS Beaufort. Figures 2 through 7 provide a more detailed illustration of the identified areas.

### **3.1 EOD RANGE**

The Explosive Ordnance Disposal (EOD) Range is located at the end of Range Road, west of the northern end of runway 23, as shown in Figure 2. Operations at the EOD range include training EOD personnel to neutralize Improvised Explosive Devices (IEDs). During training simulations, IEDs may be detonated. During personnel interviews, the Fire Department Chief and the EOD Safety and Environmental Representative confirmed that no AFFF is used during fire response activities at the range (Attachment F). Emergency fire response at the EOD Range includes using a master stream device connected to a water source to contain and extinguish the flame.

Historic and current fire response procedures at the EOD range do not include the use of AFFF. Based on this information, the Navy recommends NFA for this area.

### **3.2 SWMU 89 – SURFACE DEBRIS AREA**

Solid Waste management Unit (SWMU) 89 is located near the intersection of Funa Futi Road E and RC West Road N, as shown in Figure 2. Miscellaneous debris was located in this area, including of deteriorated drums, wire, steel grates, paint cans, and possible munitions-related debris (Tetra Tech, 2015). The years of disposal at SWMU 89 are unknown. There are no records of fire responses in this area.

Based on the type of debris disposed and the absence of fire response activities in this area, there is no reason to believe that AFFF was used or disposed in SWMU 89. Based on this information, the Navy recommends NFA for this area.

### **3.3 SWMU 17 – FUNA FUTI DISPOSAL AREA**

SWMU 17 consists of the former Funa Futi Disposal Area that was located adjacent to Cala Road, as shown in Figure 2. The site covered approximately 6500 square feet of a wooded area and was used for waste disposal in the 1960's. Materials disposed in this area included steel cable, empty paint cans, 55-gallon drums, 5-gallon containers, bottles and cans, empty glass containers and large rolls of wire (Dames and Moore, 1986). The containers and drums present in the disposal area appeared to have been open and empty at the time of disposal. Excavation of the disposal area was completed during development of the ordinance handling pads in 1988 (USACE, 2003a).

Based on the waste disposed in this area, there is no indication that AFFF or other materials containing PFAS were used or disposed in SWMU 17. Based on this information, the Navy recommends NFA for this area.

### **3.4 SWMU 75 – HAZARDOUS WASTE CONTAINER STORAGE FACILITY**

The hazardous waste container storage area (SWMU 75) is located at the intersection of NREAO Loop and Iwate Maru Road, as shown in Figure 3. The storage area has a maximum inventory of 240 55-gallon drums, and acts as a temporary storage location for drums prior to transport and disposal (A.T. Kearny, Inc., 1986). The area is divided into six storage bays with spill containment structures and drums are stored on wooden pallets on a concrete pad. Additionally, Buildings 1258 and 1205 are located at SWMU 75 and serve as offices for waste management personnel and the non-regulated waste storage area, respectively.

Wastes stored at SWMU 75 have historically included asbestos, contaminated rags, contaminated absorbent material, acids, alkalines, chlorinated hydrocarbons and other solvents (A.T. Kearny, Inc., 1986). The MCAS Beaufort Environmental Compliance Manager reported that pure AFFF, AFFF rinsate and AFFF contaminated solids have historically been, and currently are, stored in Building 1205. According to current storage records, AFFF concentrate in 55-gallon drums and 5-gallon buckets, debris contaminated with AFFF in 55-gallon drums, and AFFF rinsate in 55-gallon drums are stored in Building 1205 (Attachment A). Additionally, 55-gallon drums and carbon drums containing treated groundwater associated with a current PFAMS investigation (SWMU 12) are temporarily stored on pallets at SWMU 75. The carbon drums are used to filter the PFAS contaminated groundwater prior to disposal.

Good housekeeping practices at the AFFF storage locations were noted during the site walk. Storage records are kept up to date and personnel who oversee the area do regular inspections to ensure the containers are not compromised. The containers were in good condition during the site walk, and there was no evidence of spills. According to site personnel, no spills or releases have been reported in this area (Attachment F).

SWMU 75 is an area of known storage of AFFF and AFFF contaminated materials. However, there are no documented releases of AFFF in this area, and housekeeping and record keeping practices indicate appropriate management of AFFF material in this area. Based on this information, SWMU 75 is recommended for NFA.

### **3.5 SWMU 80 – OIL WATER SEPARATOR (WASH RACK 953)**

SWMU 80 is the oil water separator (OWS) associated with Aircraft Wash Rack 953 located along the flight line to the east of Hangar 728, as shown in Figure 4. The wash rack area consists of a concrete pad for washing aircraft, an associated wash rack equipment storage building and an OWS. The runoff from the concrete pad enters the OWS, which separates out fuels during the washing of aircraft. The OWS is only connected to the wash rack and is outfitted

with an on/off valve that prevents releases of storm water into the sanitary sewer. The valve remains closed when the wash rack is not in use (Attachment F).

Results of this assessment could not confirm PFAS were an active component of materials used at the wash rack. Based on this information, the Navy recommends NFA for SWMU 80.

### **3.6 SWMU 81 – OIL WATER SEPARATOR (WASH RACK 959)**

SWMU 81 is the OWS associated with the Aircraft Wash Rack 959 located to the east of Hangar 594 as shown in Figure 4. The wash rack area consists of a concrete pad for washing aircraft, an associated wash rack equipment storage building and an OWS. The runoff from the concrete pad enters the OWS, which separates out fuels during the washing of aircraft. The OWS is only connected to the wash rack and is outfitted with an on/off valve that prevents releases of storm water into the sanitary sewer. The valve remains closed when the wash rack is not in use (Attachment F).

Results of this assessment could not confirm PFAS were an active component of materials used at the wash rack. Based on this information, the Navy recommends NFA for SWMU 81.

### **3.7 BUILDING 1270 – JOINT HAZMIN CENTER**

Building 1270 is the Joint Hazardous Material Minimization (HAZMIN) Center located west of Hangar 729 at the intersection of 2nd Avenue and C-Street, as shown in Figure 4. HAZMIN operations at this location began in November 2005 and include management of the purchase, use and storage of all hazardous materials at MCAS Beaufort (Navy, 2010). Currently, four 5-gallon pails (20 gallons) of PHOS-CHEK 3% AFFF are stored in Building 1270. The AFFF was manufactured by ICL Performance Products in September 2016 (Attachment A).

The Hazardous Materials Manager reported that the containers of AFFF are stored on pallets and remain closed for the duration of the time that they are stored in Building 1270 (Attachment F). Containers of AFFF remain unopened during transportation to the location where they will be used. Daily walkthroughs of the storage area are completed to ensure that container integrity has not been compromised and that no leaks or spills have occurred. Good housekeeping practices at the AFFF storage locations were noted during the site walk. Storage records are kept up to date and personnel who oversee the area do regular inspections to ensure the containers are not compromised. The containers were in good condition during the site walk, and there was no evidence of spills. According to site personnel, no spills or releases have been reported in this area.

Building 1270 is an area of known storage of AFFF. However, there are no documented releases of AFFF in this area, and housekeeping and record keeping practices indicate



appropriate management of AFFF material in this area. Based on this information, Building 1270 is recommended for NFA.

### **3.8 BUILDING 262 – ARFF BUNKER**

Building 262 is the Aircraft Rescue and Firefighting (ARFF) Bunker, located on Tacan Loop to the east of A5 Taxiway, as shown in Figure 5. The building is used to store materials associated with ARFF activities, including unused AFFF. AFFF is stored in Building 262, including 21 5-gallon pails (105 gallons) of Ansulite 3% Polar Solvents AFFF manufactured prior to June 2016, and 109 5-gallon pails of ICL Performance Products PHOS-CHEK 3% AFFF manufactured in September 2016 (Attachment A).

The ARFF Materials Chief reported that the containers of AFFF are stored on pallets and remain closed for the duration of the time that they are stored in Building 262 (Attachment F). Containers of AFFF remain unopened through transportation to the location where they will be used. Regular walkthroughs of the storage area are completed to ensure that container integrity has not been compromised and that no leaks or spills have occurred. Good housekeeping practices at the AFFF storage location were noted during the site walk. Storage records are kept up to date and personnel who oversee the area do regular inspections to ensure the containers are not compromised. The containers were in good condition during the site walk, and there was no evidence of spills. According to site personnel, no spills or releases have been reported in this area.

Building 262 is an area of known storage of AFFF. However, there are no documented releases of AFFF in this area, and housekeeping and record keeping practices indicate appropriate management of AFFF material in this area. Based on this information, Building 262 is recommended for NFA.

### **3.9 BUILDING 617 – AHTNA TECHNICAL SERVICES, INC WAREHOUSE**

Building 617 is the Ahtna Technical Services, Inc. (ATSI) Warehouse, located on Engineer Avenue, as shown in Figure 6. The building is used to store materials associated with maintenance activities, including unused AFFF. A total of 885 gallons of AFFF are stored in Building 262, including one 5-gallon pail of Chem-Guard 3% AFFF with an unknown manufacture data, three 55-gallon drums (165 gallons) of Chem-Guard 3% AFFF manufactured on September 4, 2015, 12 55-gallon drums (660 gallons) of Chem-Guard 3% AFFF manufactured on July 31, 2015, and one 55-gallon drum of Buckeye 3% AFFF with an unknown manufacture date (Attachment B).

The ATSI Warehouse Site Safety Manager reported that the containers of AFFF are stored on pallets and remain closed for the duration of the time that they are stored in Building 617

(Attachment F). Containers of AFFF remain unopened through transportation to the location where they will be used. Weekly walkthroughs of the storage area are completed to ensure that container integrity has not been compromised and that no leaks or spills have occurred. No releases at this location have been reported and during a site walk, AECOM found no evidence of releases. Additionally, good housekeeping and record keeping are practiced at this location.

No records were found that indicate any release of AFFF has occurred at Building 617. Additionally, housekeeping and record keeping practices indicate appropriate management of AFFF material in this area. Therefore, the recommended path forward for Building 617 is NFA.

### **3.10 SWMU 5 – PESTICIDE RESIDUE PIT AREA**

SWMU 5 consists of two pesticide rinsate disposal areas located adjacent to Building 617, as shown in Figure 6. Building 617 was used as a storage and mixing facility for pesticides from 1956 through 1972 (Dames and Moore, 1986). During this time, pesticide rinsate was disposed on the ground, in a 200 square foot area on the southern corner of building 617. Records indicate that the pesticides disposed at SWMU 5 did not contain PFAS (A. T. Kearny, 1986). From 1972 to 1979, pesticide storage and mixing operations took place in building 1512 (Shaw Environmental and Infrastructure, Inc., 2012). During this time pesticide rinsate was discharged to a seepage pit on the northwestern corner of building 1512. The seepage pit consisted of a buried, open-ended 55-gallon drum filled with gravel (McClelland Consultants, 1989). Building 1512 was demolished in 1979, except for a concrete slab and the building foundation, and the gravel pit was filled with dirt (Dames & Moore, 1986). It is estimated that 31,000 gallons of pesticide rinsate was disposed at SWMU 5.

Results of this assessment could not confirm PFAS were an active component of materials disposed at SWMU 5. Based on this information, the recommended path forward for SMWU 5 is NFA.

### **3.11 SWMU 8 – KAVIENG STREET LANDFILL**

SWMU 8 consists of the former Kavieng Street Landfill adjacent to building 610 in the southeastern portion of the base, as shown in Figure 6. Waste disposal operations at SWMU 8 took place from 1955 through 1957 (Dames and Moore, 1986). Waste disposed during operation included domestic trash and garbage, empty pesticide containers, cleaning rags, oil cans and filters, painting tools, spray paint booth filters, contaminated jet fuels, waste motor and lube oils, hydraulic fluids, used solvents, paint thinners and strippers, mercury waster, and asbestos brakes.

Based on the waste disposed in this area, there is no indication that AFFF was used or disposed at SWMU 8. Additionally, operations at the site ceased prior to 1960. Based on this information, the Navy recommends NFA for this area.



### **3.12 SWMU 4 – SOUTHEAST DISPOSAL AREA**

SWMU 4 consists of the former Southeast Disposal Area at the southeastern end of Geiger Boulevard, as shown in Figure 6. Waste disposal operations at SWMU 4 took place from the late 1950's to the early 1960's (Dames and Moore, 1986). Waste disposed during operation included excess building materials and construction debris.

Based on the years of operation and the waste disposed in this area, there is no indication that AFFF was used or disposed at SWMU 4. Based on this information, the Navy recommends NFA for this area.

### **3.13 SWMU 3 – BORROW PIT LANDFILL**

SWMU 3 consists of the former Borrow Pit Landfill adjacent to building 1152 in the southern portion of the base, as shown in Figure 6. Waste disposal operations at SWMU 3 took place from 1957 through 1958 (Dames and Moore, 1986). Waste disposed during operation included domestic trash and garbage, empty pesticide containers, cleaning rags, oil cans and filters, painting tools, spray paint booth filters, contaminated jet fuels, waste motor and lube oils, hydraulic fluids, used solvents, paint thinners and strippers, mercury waster, and asbestos brakes.

Based on the waste disposed in this area, there is no indication that AFFF was used or disposed at SWMU 3. Additionally, operations at the site ceased prior to 1960. Based on this information, the Navy recommends NFA for this area.

### **3.14 SWMU 72 – BASE PHOTO LAB**

SWMU 72 includes the base photo lab located at the intersection of Geiger Boulevard and Elrod Street, as shown in Figure 6. Operations within the lab include developing photographic film. Waste generated from operations include scrap film and photographic chemicals such as fixer and developer. Approximately 120 to 340 gallons of waste chemicals are produced by the photo lab (A. T. Kearny, 1986).

During the investigation, no documentation could confirm that PFAS were an active component in developing or fixer solution. Additionally, any release of chemicals would have been limited. Based on this information, SWMU 72 is recommended for NFA.

### **3.15 FORMER BUILDING 773 – FORMER AUTO HOBBY SHOP**

The former Auto Hobby shop was located in Building 773 at the intersection of Delalio Avenue and South Kavieng Street, as shown in Figure 6. Operations at the Auto Hobby Shop included general automobile maintenance. Waste generated during operations were stored adjacent to Building 773 at Area of Concern (AOC) I and included engine oils, lube oils and hydraulic fluids

form automobiles (A. T. Kearny, 1986). Aerial images suggest that Building 773 was demolished sometime between 1994 and 2003.

No records were found that suggest PFAS were an active component of materials used at the Hobby Shop. Based on this information and Navy guidance which suggests that Auto Hobby Shops should be NFA, the Former Auto Hobby shop is recommended for NFA.

### **3.16 BUILDING 612 – ARFF WAREHOUSE**

Building 612 is the ARFF Warehouse, located on Fire Lane Road, as shown in Figure 7. The building is used to store materials associated with ARFF activities, including unused AFFF. A total of 1,805 gallons of AFFF are stored in Building 612, including 161 5-gallon pails (805 gallons) of Ansulite 3% Polar Solvents AFFF manufactured in November 2011, and 200 5-gallon pails of ICL Performance Products PHOS-CHEK 3% AFFF manufactured in September 2016 (Attachment B).

The ARFF Materials Chief reported that the containers of AFFF are stored on pallets and remain closed for the duration of the time that they are stored in Building 612 (Attachment F). Containers of AFFF remain unopened through transportation to the location where they will be used. Regular walkthroughs of the storage area are completed to ensure that container integrity has not been compromised and that no leaks or spills have occurred. Good housekeeping practices at the AFFF storage location were noted during the site walk. Storage records are kept up to date and personnel who oversee the area do regular inspections to ensure the containers are not compromised. The containers were in good condition during the site walk, and there was no evidence of spills. According to site personnel, no spills or releases have been reported in this area.

No records were found that indicate any release of AFFF has occurred at Building 612. Additionally, housekeeping and record keeping practices indicate appropriate management of AFFF material in this area. Therefore, the recommended path forward is NFA.

### **3.17 BUILDING 615 – JOINT HAZMIN STORAGE WAREHOUSE**

Building 615 is the Joint HAZMIN storage warehouse located at the intersection of Kimes Avenue and North Drayton Street, as shown in Figure 7. HAZMIN operations at this location began in November 2005 and include management of the purchase, use and storage of all hazardous materials at MCAS Beaufort (Navy, 2010). Currently, 196 containers of AFFF are stored at this location.

The Hazardous Materials Manager reported that the containers of AFFF are stored on pallets and remain closed for the duration of the time that they are stored in Building 615 (Attachment F). Containers of AFFF remain unopened through transportation to the location where they will

be used. Daily walkthroughs of the storage area are completed to ensure that container integrity has not been compromised and that no leaks or spills have occurred. Good housekeeping practices at the AFFF storage locations were noted during the site walk. Storage records are kept up to date and personnel who oversee the area do regular inspections to ensure the containers are not compromised. The containers were in good condition during the site walk, and there was no evidence of spills. According to site personnel, no spills or releases have been reported in this area.

Building 615 is an area of known storage of AFFF. However, there are no documented releases of AFFF in this area, and housekeeping and record keeping practices indicate appropriate management of AFFF material in this area. Based on this information, Building 615 is recommended for NFA.

### **3.18 SWMU 1 – FENCED HAZARD AREA**

SWMU 1 is approximately 0.8 acres, and is roughly rectangular in shape (150 feet by 250 feet). The Navy designated SWMU 1 (Figure 6) as a potential UXO site based on warning signs present at the western boundary of SWMU 1, and because of interviews that reported that radioactive and chemical wastes were suspected in this area; to date, it is unknown what activities were performed at this site. When the 0.8-acre site was discovered, it was surrounded by a rusted barbed wire fence. Some fence posts along the western boundary bore small triangular home-made warning signs that read “Gas” and “Atom.” Reportedly, SWMU 1 was last used in the mid-1960s, and the fence was erected after site operations ceased; however, the exact use of the area prior to fence construction is unknown. Historical investigations (McClelland Consultants, 1989) indicated that SWMU 1 was not used as a disposal area or for radiological activities.

In 1988, radiation and geophysical surveys were conducted within the fenced area of SWMU 1. The radiation survey did not identify any anomalous or suspected radioactive areas within the fenced area of SWMU 1. The geophysical survey did not identify any area within the fenced area that appeared to be indicative of buried metallic or electrically conductive material.

Subsequent investigations, both geophysical and environmental, were conducted in the area in 2001, 2010, and 2013. None of these investigations revealed the presence of buried waste or surface disposal at SWMU 1 (Resolution Consultants, 2017).

Based on the absence of waste disposed in this area, there is no indication that AFFF was used or disposed at SWMU 1. Based on this information, the Navy recommends NFA for this area.

### **3.19 SWMU 84 – PISTOL RANGE LANDFILL**

SWMU 84 is located in a wooded area in the northeast quadrant of MCAS Beaufort within a small drainage feature that opens into a salt marsh (Figure 1). SWMU 84 was originally investigated as the Site 23 Pistol Range Landfill. Surface debris was found at the northern portion of the SWMU boundary, but no evidence was found to indicate the site was ever a landfill. The surface debris, consisting of approximately 2 cubic yards of scattered household refuse, including scrap metal, wood pieces and soda cans, was removed in October 2011 and disposed of as non-regulated municipal waste (CH2MHILL, 2015).

An initial Preliminary Assessment (PA) was conducted at the site in 1989. The alleged landfill was believed to have been active from 1978 through 1980 and covered with nearby soils between 1981 and 1984. Results of the PA identified no visual evidence of hazardous materials or drummed waste disposal. The PA did identify surface debris, described as trash, in a portion of the site (CH2MHILL, 2015).

Based on the waste disposed in this area, there is no indication that AFFF was used or disposed at SWMU 84. Based on this information, the Navy recommends NFA for this area.

### **3.20 SWMU 9 – FORMER LUBE OIL PIT**

SWMU 9 - The Former Lube Oil Pit was located in a 1-acre field next to the Combat Service Support Detachment 23 along DeLalio Avenue about 300 feet north of the tidal marsh drained by Albergotti Creek (Figure 7). The site contained a rubble-filled concrete pit approximately 4-feet deep that was originally used as a service area for changing motor oil and performing minor vehicle maintenance. Official MCAS Beaufort operations at the lube pit ceased in 1974, although the area reportedly received continued use after 1974 by private parties (USACE, 1999).

Based on the waste disposed in this area, there is no indication that AFFF was used or disposed at SWMU 9. Based on this information, the Navy recommends NFA for this area.

### **3.21 SWMU 76 – FORMER INCINERATOR DISPOSAL AREA**

SWMU 76 is located along the approach to Runway 32 in the southeast portion of MCAS Beaufort (Figure 6). The site occupies approximately 5.7 acres and is mostly comprised of well-maintained grasses and a few sparse trees. SWMU 76 includes two site features: former Building 231 and a concrete vault located approximately 80 feet south of the former Building 231 location. The former Building 231 housed an incinerator and was likely used to incinerate and dispose of trash and other combustible wastes from 1943 until 1946 (Dames and Moore, 1986). The incinerator was reportedly 20 feet long and was demolished in the mid-1950s (Dames and Moore, 1986). Currently, an earthen mound remains at the approximate location of former Building 231.

Based on the waste disposed in this area and the time of operation (before 1960), there is no indication that AFFF was used or disposed at SWMU 76. Based on this information, the Navy recommends NFA for this area.

### **3.22 SWMU 77 – ACID NEUTRALIZATION PIT**

SWMU 77 is located northwest of the intersection of Drayton Street and 2nd Street in the southwest quadrant of MCAS Beaufort (Figure 4). SWMU 77 Acid Neutralization Pit was originally incorporated into the site design for former Building 36 for the disposal of used and surplus battery electrolyte. Building 36 served as a Ground Support Equipment Facility, a Battery Maintenance Shop, and later as the MCAS Hazardous Waste Minimization Facility. The pit was discovered by accident in December 2000 when heavy equipment was driven across it, cracking the concrete slab cover (USACE, 2003b).

A visual description completed in October 2002 describes the pit as a 2-foot by 2-foot concrete vault, approximately 2.5-feet deep with 5-inch thick walls. The floor of the vault was concrete and was covered with several inches of limestone gravel. A ¾-inch steel plate had replaced the damaged concrete cover. The vault was designed with an influent pipe, which was connected to Building 36 via a floor drain, and an effluent pipe, which exited to the northeast. Building 36 was demolished in October 2008 and the flooring, floor drains, piping, and pit were removed in January 2009 (USACE, 2003b).

Based on the waste disposed in this area, there is no indication that AFFF was used or disposed at SWMU 77. Based on this information, the Navy recommends NFA for this area.

### **3.23 SWMU 85 - AUTOMOTIVE DEBRIS PILE**

SWMU 85 is located near the northwest corner of MCAS Beaufort, near the end of runway 14 (Figure 1). Two debris piles and several small soil piles that contained various amounts of debris were discovered at the site. The soil piles originally ranged from 1 to 3 feet in height. The debris piles were present at the time the parcel was acquired by MCAS and no documentation of the origin or use of the piles has been identified. Little is known about the site history or the source of the debris and it is unclear when the debris was placed in the area (Tetra Tech, 2014b).

Based on the waste disposed in this area, there is no indication that AFFF was used or disposed at SWMU 85. Based on this information, the Navy recommends NFA for this area.

### **3.24 SWMU 87 – 1940'S ERA WASTE WATER TREATMENT PLANT**

SWMU 87 – Former 1940's-Era WWTP is located near the center of MCAS Beaufort (Figure 4). The former WWTP was in operation during the time the Beaufort installation was an NAS from 1942 to 1946. SWMU 87 is believed to have been closed down in 1946 when the NAS was

closed. The former WWTP consisted of sedimentation basins, a sludge digester, sludge drying beds, and a control building (Tetra Tech, 2014a).

Based on the time of operation (before 1960), there is no indication that AFFF was used or disposed at SWMU 87. Based on this information, the Navy recommends NFA for this area.

## 4. SUMMARY AND RECOMMENDATIONS

The Navy has recommended 24 areas/buildings for NFA. A comprehensive list of these areas that includes details of the site specific CSMs and recommended path forward is provided in Table 1. Figures 1 through 7 provide a graphical summary of these areas.

Site-specific CSMs were developed using site drawings, historic investigation reports, and other lines of evidence to evaluate the likelihood of PFAS impacts. Based on the information available, the Navy has provided recommendations for NFA for each evaluated area included in this memo. The identified areas and recommendations provided on Table 1 are based on the available site histories and information, discussions with MCAS Beaufort staff, and an understanding of common practices associated with the identified uses of PFAS.

Results of this assessment recommended 18 specific areas or buildings on MCAS Beaufort for NFA. Recommendations were made based on Navy Guidance (2018), and history of use and/or lack of evidence regarding the release or presence of materials containing PFAS.

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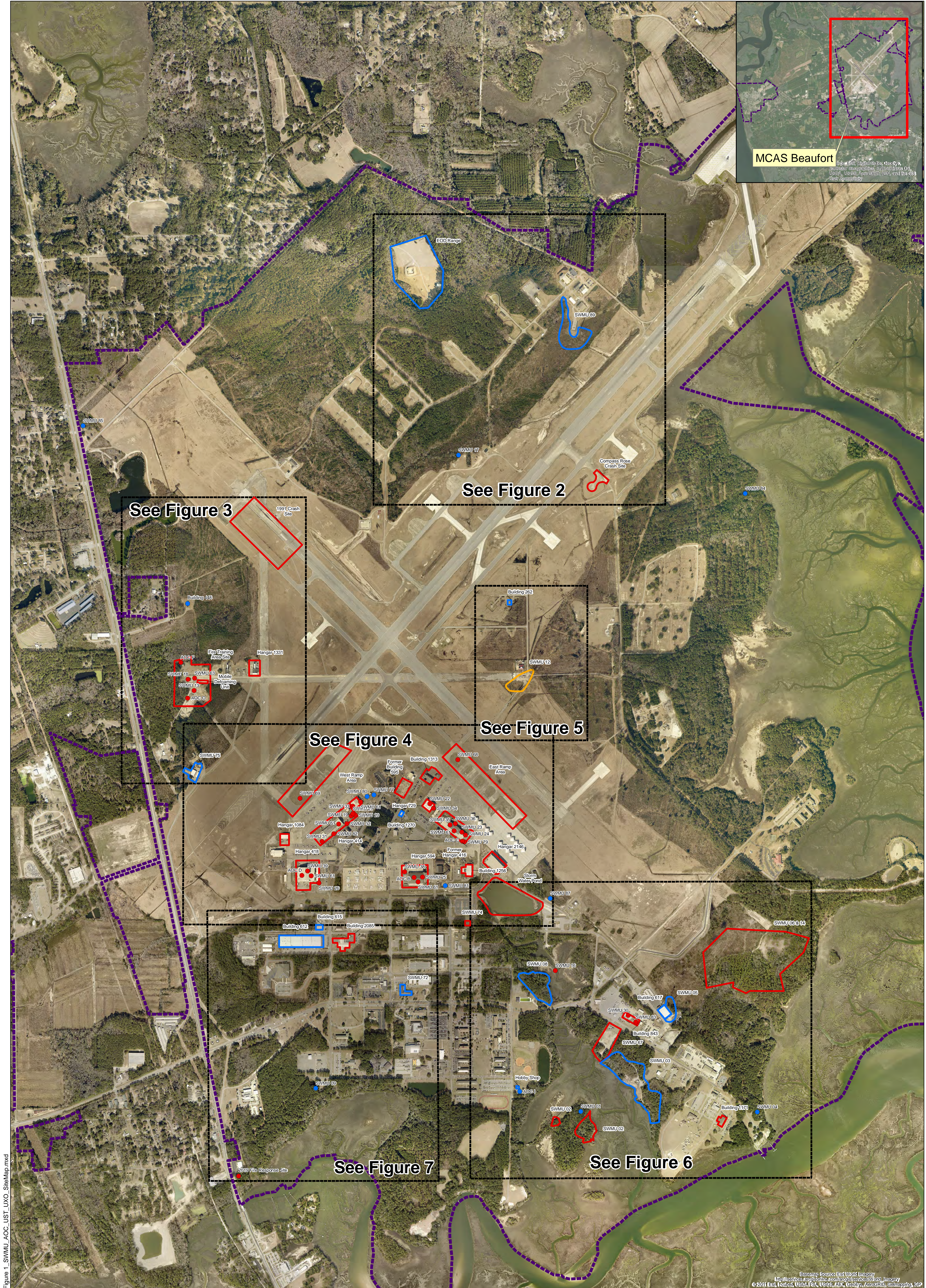
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## FIGURES



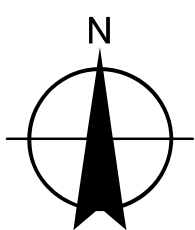


L:\work\GIS\MCAS Beaufort\maps\PA Report\Figure 1 - SWMU - AOC - UST - UXO - SiteMap.mxd

**Legend**

- Potential PFAS Investigation Area
- No Further Action at this Time
- Potential PFAS Investigation
- Current PFAS Investigation

NOTES:  
-All locations are approximate and represent the center of the named area.  
-RCRA Permit SC1 750 216 169 Dated 1/13/2015.



0 775 1,550 Feet

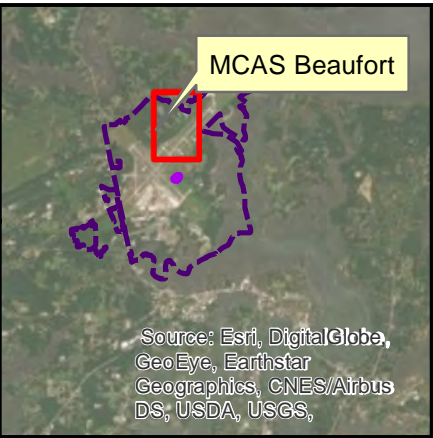
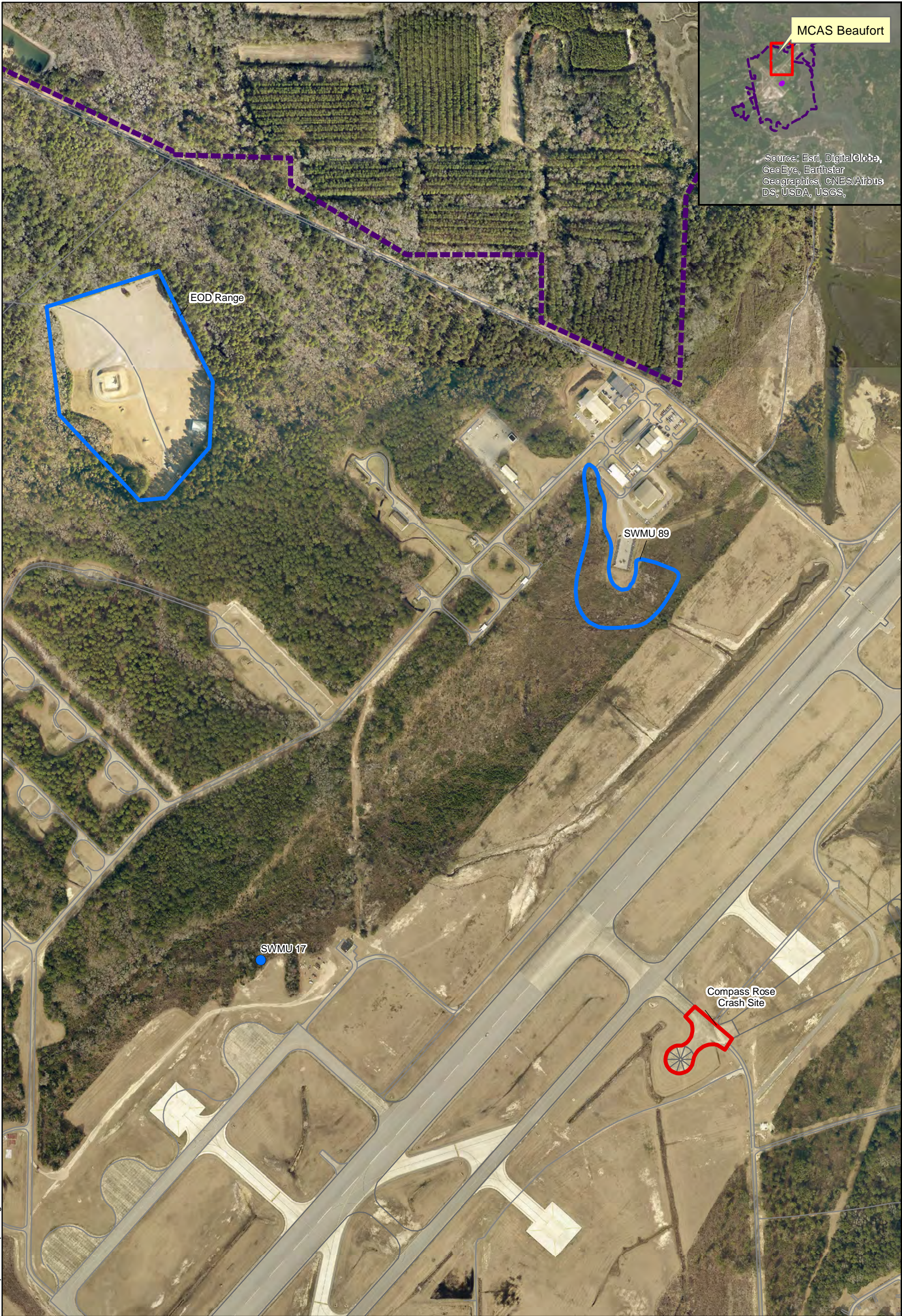
Figure 1  
Sitewide Areas of Concern and Operable Units  
MCAS Beaufort  
Beaufort, South Carolina



REQUESTED BY: SED  
DRAWN BY: RDA  
DATE: 6/27/2019  
TASK ORDER NUMBER: 18F4605



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**Legend**

- No Further Action at this Time
- Property Boundary
- No Further Action at this Time
- Potential PFAS Investigation
- Former Runway and Taxiway

FIGURE 2  
NORTHERN AREAS AND BUILDINGS  
MCAS BEAUFORT, SOUTH CAROLINA



REQUESTED BY: TSR	DATE: 6/27/2019
DRAWN BY: LLM	TASK ORDER: 18F4605

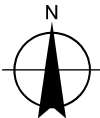




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**Legend**

- Potential PFAS Investigation Area
- Property Boundary
- No Further Action at this Time
- Potential PFAS Investigation
- Former Runway and Taxiway



0 200 400  
Feet  
1 inch = 400 feet

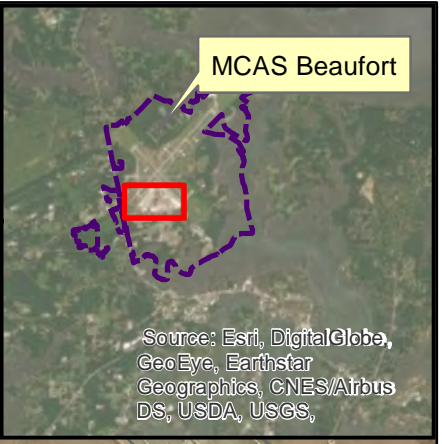
FIGURE 3  
WESTERN AREAS AND BUILDINGS  
MCAS BEAUFORT, SOUTH CAROLINA



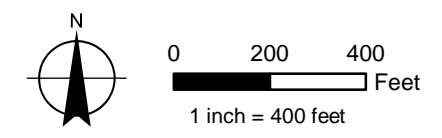
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DRAWN BY: LLM	TASK ORDER: 18F4605



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- Legend**
- Potential PFAS Investigation Area
  - No Further Action at this Time
  - No Further Action at this Time
  - Potential PFAS Investigation
  - Former Runway and Taxiway



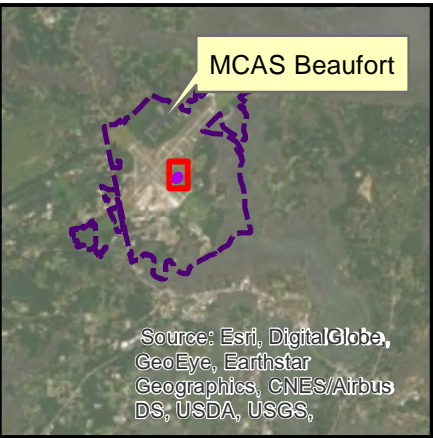
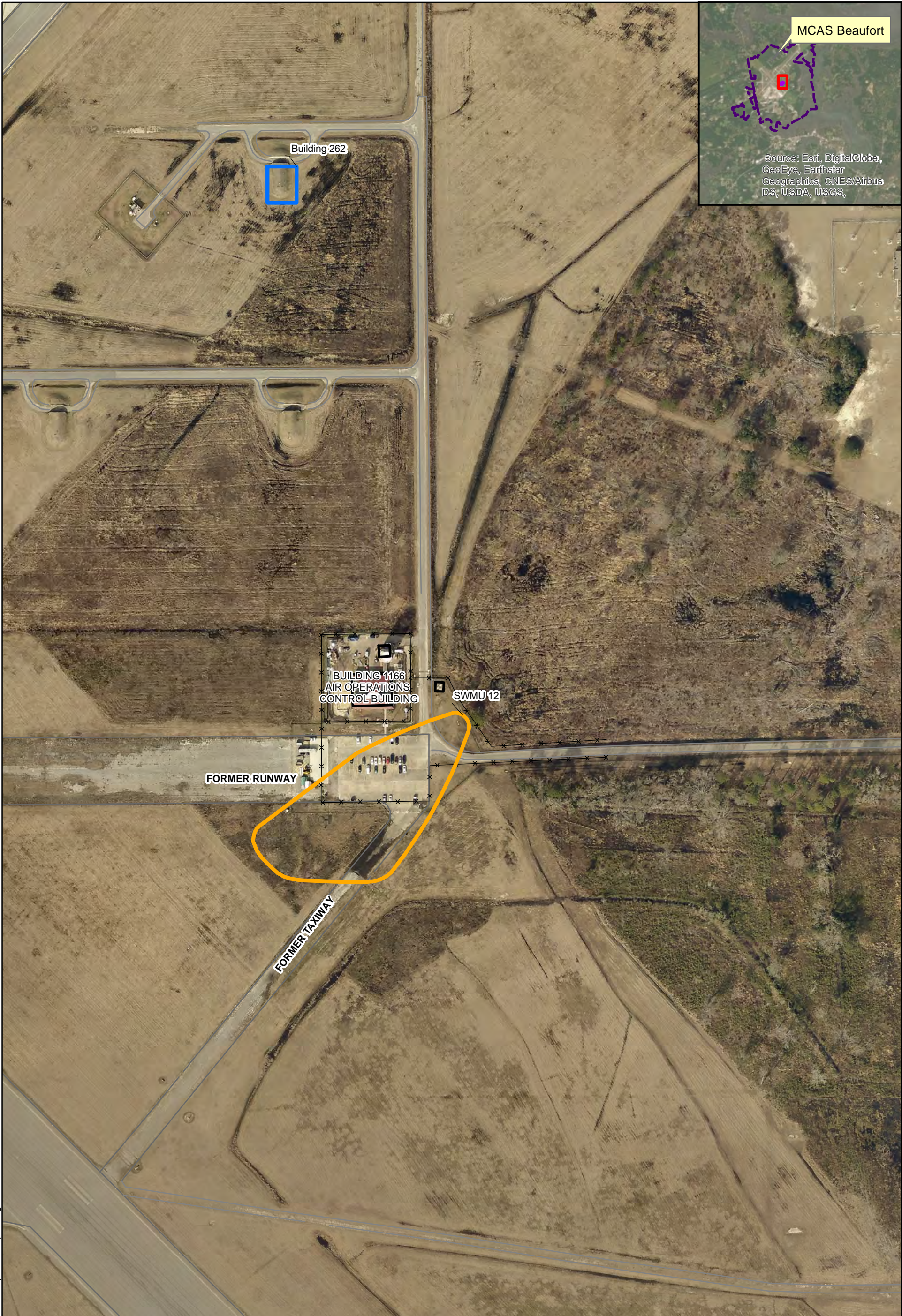
**FIGURE 4**  
CENTAL AREAS AND BUILDINGS  
MCAS BEAUFORT, SOUTH CAROLINA

**NAVFAC**  
Naval Facilities Engineering Command






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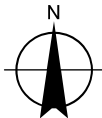


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**Legend**

-  No Further Action at this Time
-  Current PFAS Investigation
-  Fence
-  Former Runway and Taxiway
-  Existing Building



0 100 200 Feet  
1 inch = 200 feet

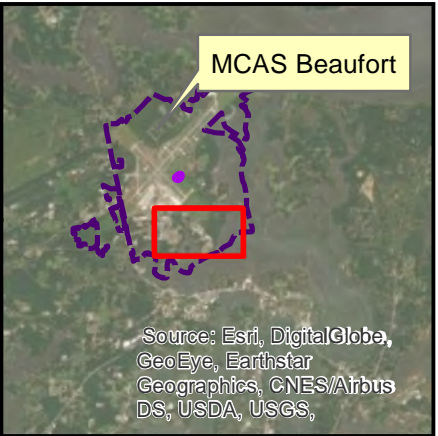
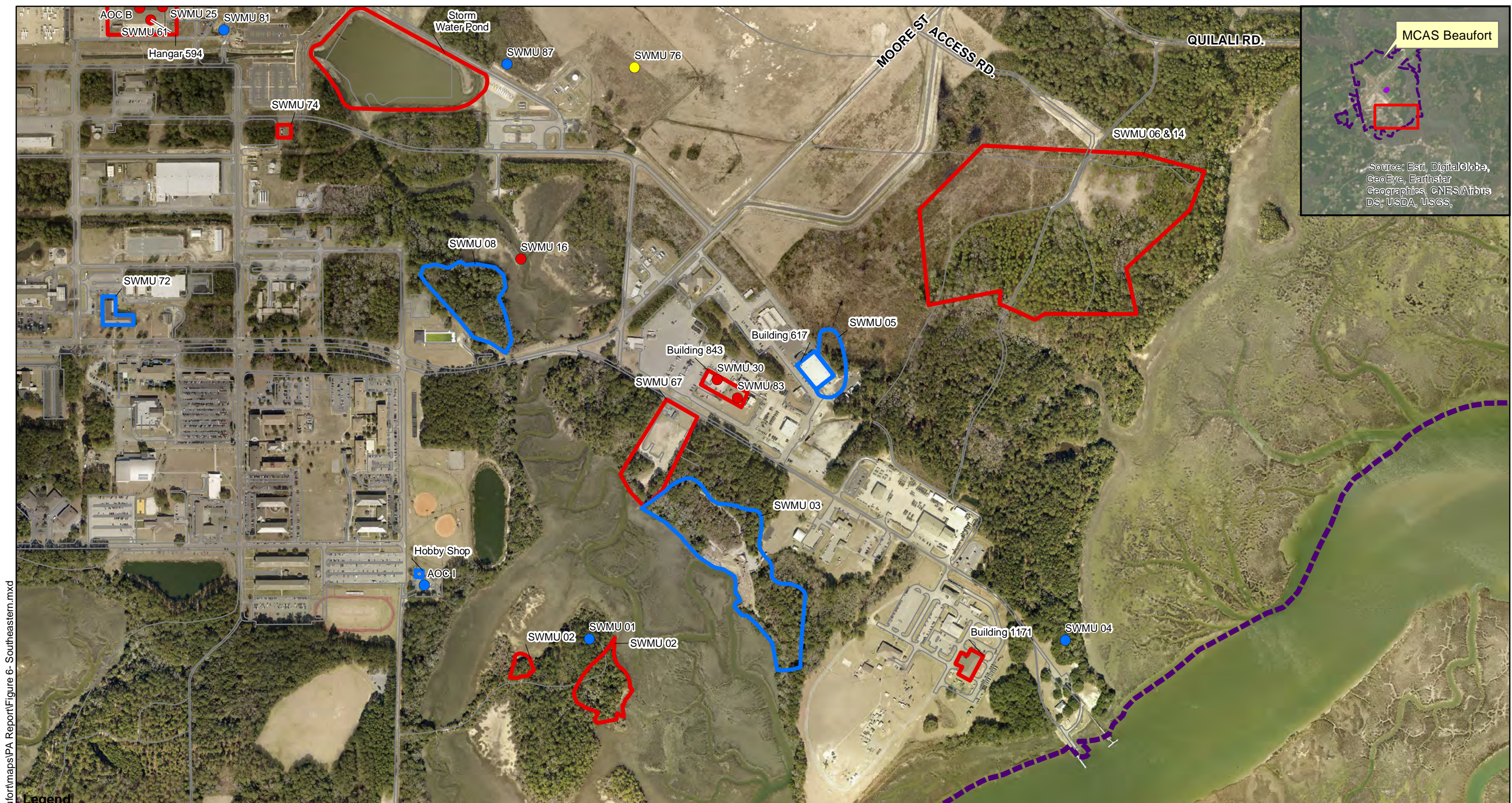
FIGURE 5  
EASTERN AREAS AND BUILDINGS  
MCAS BEAUFORT, SOUTH CAROLINA



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DRAWN BY: LLM	TASK ORDER: 18F4605



Path: L:\work\GIS\MCAS\_Beaufort\maps\PA Report\Figure 6- Southeastern.mxd



- Legend**
- Potential PFAS Investigation Area
  - Not in Preliminary Assessment
  - No Further Action at this Time
  - No Further Action at this Time
  - Potential PFAS Investigation
  - ▬ Property Boundary
  - ▬ Former Runway and Taxiway

**FIGURE 6**  
SOUTHEASTERN AREAS AND BUILDINGS  
MCAS BEAUFORT, SOUTH CAROLINA



REQUESTED BY: TSR	DATE: 6/27/2019
DRAWN BY: LLM	TASK ORDER: 18F4605



Path: L:\work\GIS\MCAS\_Beaufort\maps\PA Report\Figure 7- SouthWestern.mxd



**Legend**

- Potential PFAS Investigation Area
- No Further Action at this Time
- Property Boundary
- No Further Action at this Time
- Potential PFAS Investigation
- Former Runway and Taxiway

0 200 400 Feet  
1 inch = 400 feet

**FIGURE 7**  
**SOUTHWESTERN AREAS AND BUILDINGS**  
**MCAS BEAUFORT, SOUTH CAROLINA**

REQUESTED BY: TSR	DATE: 6/27/2019
DRAWN BY: LLM	TASK ORDER: 18F4605



## TABLES

**Table 1**  
**Sites Reccomended for NFA**  
**PFAS Preliminary Assessment**  
**MCAS Beaufort, Beaufort, South Carolina**

Building/Area Name	Location	Years of Operation	Potential PFAS Release Mechanism	Current Status	Recommended Path Forward
SWMU 75 - Hazardous Waste Container Storage Facility	On NREAO Loop	Unknown-present	Potential storage of waste PFAS-containing materials. Storage of drums containing AFFF contaminated debris and AFFF rinsate	Active	NFA is warranted for SWMU 75 because there is no documented release or evidence of release.
EOD Range	West of northern end of Runway 23	Unknown-present	Fire suppression	Active	NFA is warranted for the EOD Range because firefighting activities only involve the use of water. No AFFF is used in fire response at this site.
SWMU 89-Surface Debris Area	Near intersection of Funa Futi Road E and RC West Road N	Unknown	Waste Disposal	Inactive	NFA is warranted for SWMU 89 because there is no evidence to suggest that AFFF or AFFF impacted debris were disposed of in this area.
SWMU 17-Funa Futi Disposal Area	Adjacent to Cala Way	1960's and 1970's	Waste Disposal	Inactive	NFA is warranted for SWMU 17 because there is no evidence to suggest that AFFF or AFFF impacted debris were disposed of in this area.
SWMU 80-Oil Water Separator (Wash Rack 953)	Adjacent to Hangar 738	Unknown-present	Runoff potentially containing PFAS-containing material.	Active	NFA is suggested by Navy guidance for washing areas.
SWMU 81-Oil Water Separator (Wash Rack 959)	Adjacent to Hangar 594	Unknown-present	Runoff potentially containing PFAS-containing material.	Active	NFA is suggested by Navy guidance for washing areas.
Building 1270-Joint Hazmin Center	At the intersection of 2nd Avenue and C-Street	Unknown-present	Storage of unused AFFF.	Active	NFA is warranted for Building 1270 because there is no documented release or evidence of release.
Building 262-ARFF Bunker	On Tacan Loop, off of Bunker Avenue	Unknown-present	Storage of unused AFFF.	Active	NFA is warranted for Building 262 because there is no documented release or evidence of release.
Building 612-ARFF Warehouse	On Fire Lane Road	Unknown-present	Storage of unused AFFF.	Active	NFA is warranted for Building 612 because there is no documented release or evidence of release.
Building 2145-Pilot Training Building	At the western end of Lightning Drive	Unknown-present	AFFF stored in AST associated with fixed fire suppression system	Active	NFA is warranted for Building 2145 because there is no documented release or evidence of release.
SWMU 72-Base Photo Lab	At the intersection of Geiger Boulevard and Elrod Street	1955-present	Use/storage of photograph developing solution.	Active	NFA is warranted for SWMU 72 because no documentation could confirm PFAS were an active component in the developing solution, and any potential release would have been limited.
Auto Hobby Shop	At the intersection of Delalio Avenue and South Kavieng Street	Unknown-present	Potential storage or use of PFAS-containing materials.	Active	NFA is suggested by Navy guidance for areas that do not have AFFF or significant releases of other PFAS-containing products..
Building 617-ATSI Warehouse	On Engineer Avenue	Unknown-present	Storage of unused AFFF.	Active	NFA is warranted for Building 617 because there is no documented release or evidence of release.
SWMU 5-Pesticide Residue Pit Area	Adjacent to building 617	1956-1979	Pesticide disposal.	Inactive	NFA is warranted for SWMU 5 because records indicate the pesticides disposed of did not contain PFAS.

Table 1  
Sites Reccomended for NFA  
PFAS Preliminary Assessment  
MCAS Beaufort, Beaufort, South Carolina

Building/Area Name	Location	Years of Operation	Potential PFAS Release Mechanism	Current Status	Recommended Path Forward
SWMU 8-Kavieng Street Landfill	Adjacent to building 610	1955-1957	Waste Disposal	Inactive	NFA is warranted for SWMU 8 because no confirmed disposal after 1960 occurred.
SWMU 4-Southeast Disposal Area	At the southeastern end of Geiger Boulevard	1950's or 1960's	Waste Disposal	Inactive	NFA is warranted for SWMU 4 because records indicate only inert debris (construction debris, drums, trash) were disposed of in this area.
SWMU 3-Borrow Pit Landfill	Adjacent to building 1152	1957-1958	Waste Disposal	Inactive	NFA is warranted for SWMU 3 because no confirmed disposal after 1960 occurred.
SWMU 1 - Fenced Hazard Area	Northeast corner of the unnamed island off of Lafrene Road	mid-1960's	Waste Disposal	Inactive	NFA is warranted for SWMU 1 because there is no evidence to suggest that PFAS were an active component in the materials disposed of at this location.
SWMU 84 - Pistol Range Landfill	East of the Pistol Range located on Pistol Range Road	1978-1980	Waste Disposal	Inactive	NFA is warranted for SWMU 84 because records indicate only inert debris (wood pieces, scrap metal, trash) were disposed of in this area.
SWMU 9 - Former Lube Oil Pit	To the south of Building 1150	Unknown-1974 (authorized), and 1974-1984 (unauthorized)	Concrete pit used for changing vehicle motor oil and minor repair work.	Inactive	NFA is warranted for SWMU 9 because no documentation could confirm PFAS were an active component in the materials used at this location.
SWMU 76 - Former Incinerator Disposal Area	Northeast of Tank Farm B	Unknown-mid 1950's	Underground concrete tank and surface debris.	Inactive	NFA is warranted for SWMU 76 because no confirmed disposal after 1960 occurred and no documentation could confirm PFAS were an active component in the materials disposed of in this area.
SWMU 77- Acid Neutralization Pit	Northwest of Drayton Street and 2nd Street intersection	Unknown	Underground concrete vault used as an acid neutralization pit.	Inactive	NFA is warranted for SWMU 77 because there is no evidence to suggest that PFAS were an active component in the materials disposed of at this location.
SWMU 85 - Automotive Debris Pile	Northwest of the end of Runway 14	Unknown	Waste Disposal	Inactive	NFA is warranted for SWMU 85 because there is no evidence to suggest that AFFF or AFFF impacted debris were disposed of in this area.
SWMU 87 - 1940's Era Wastewater Treatment Plant	Adjacent to the northeastern margin of the storm water pond	1942-1946	Wastewater Treatment Plant	Inactive	NFA is warranted for SWMU 87 because the treatment plant was decommissioned prior to 1960.

**Notes:**  
AFFF - Aqueous Film Forming Foam  
AOC - Area of Concern  
ARFF - Aircraft Rescue and Fire Fighting  
ATSI - AHTNA Technical Services, Inc.  
EOD - Explosive Ordnance Disposal  
NFA - No Further Action

PFAS - Per- And Polyfluoroalkyl Substances  
SWMU - Solid Waste Management Unit

## ATTACHMENT A

Attachment A  
AFFF Storage Inventories  
PFAS Preliminary Assessment  
MCAS Beaufort, Beaufort, South Carolina

Installation Name										AFFF Concentrate (Unused Product) Inventory for Removal				AFFF Rinsate or Contaminated Water Inventory for Removal								* One of these dates must be populated	
	Generator DoDAAC	Generator Status LQG, SQG, VSQG (If Known)	Generator EPA ID #	Physical Address and Bldg # for Pickup	POC Names(s) for Coordinating Removals	POC Email(s) for Coordinating Removals	POC Commercial Phone #(s) *Not DSN*	Forklift & Operator Available to Assist?	Normal Business Hrs Example: M-F 0800-1600	5-Gal Pails (Each)	55-Gal Drums (Each)	Any Size Totes (Each)	Bulk Other Than Totes (Gal)	5-Gal Pails (Each)	55-Gal Drums (Each)	Any Size Totes (Each)	Bulk Other Than Totes (Gal)	Total Quantity	Notes	AFFF Manufacture	Nomenclature / Trade Name	Manufacter Date*	Shelf-Life Date*
MCAS Beaufort		LQG	SC1750216169	Structural Fire Department, Bldg 2085	Chief Darran Vaughn	darran.vaughn@usmc.mil	843-228-7293	Y	M-F 0800-1600	0	0	0	0	0	0	0	0	0		NA	NA	NA	NA
MCAS Beaufort	M00273	LQG	SC1750216169	ARFF, Bldg 1313	Sgt Timothy Sunday	timothy.sunday@usmc.mil	843-228-6289	Y	M-F 0800-1600	1	0	0	0	0	0	0	0	5		National Foam		Pre 6/16	NA
MCAS Beaufort	M00273	LQG	SC1750216169	ARFF, Bldg 612, Warehouse	Sgt Timothy Sunday	timothy.sunday@usmc.mil	843-228-6289	Y	M-F 0800-1600	161	0	0	0	0	0	0	0	805		ANSULITE	ANSULITE 3% POLAR SOLVENTS	11/11	NA
MCAS Beaufort	M00273	LQG	SC1750216169	ARFF, Bldg 612, Warehouse	Sgt Timothy Sunday	timothy.sunday@usmc.mil	843-228-6289	Y	M-F 0800-1600	200	0	0	0	0	0	0	0	1,000		ICL PERFORMANCE PRODUCTS	PHOS-CHEK 3% AFFF	9/16	NA
MCAS Beaufort	M00273	LQG	SC1750216169	ARFF, Bldg 262, Bunker	Sgt Timothy Sunday	timothy.sunday@usmc.mil	843-228-6289	Y	M-F 0800-1600	21	0	0	0	0	0	0	0	105		ANSULITE	ANSULITE 3% POLAR SOLVENTS	Pre 6/16	NA
MCAS Beaufort	M00273	LQG	SC1750216169	ARFF, Bldg 262, Bunker	Sgt Timothy Sunday	timothy.sunday@usmc.mil	843-228-6289	Y	M-F 0800-1600	109	0	0	0	0	0	0	0	545		ICL PERFORMANCE PRODUCTS	PHOS-CHEK 3% AFFF	9/16	NA
MCAS Beaufort		LQG	SC1750216169	Joint Hazmin Center (JHC), Bldg 1270	Walter McCall	walter.mccall@usmc.mil	843-228-7295	Y	M-F 0800-1600	3	0	0	0	0	0	0	0	15		ICL PERFORMANCE PRODUCTS	PHOS-CHEK 3% AFFF	9/16	NA
MCAS Beaufort		LQG	SC1750216169	Joint Hazmin Center (JHC), Bldg 1270	Walter McCall	walter.mccall@usmc.mil	843-228-7295	Y	M-F 0800-1600	1	0	0	0	0	0	0	0	5		ICL PERFORMANCE PRODUCTS	PHOS-CHEK 3% AFFF	12/15	NA
MCAS Beaufort		LQG	SC1750216169	NREAO, Tank 979	Chris Vaigneur	christopher.vaigneur@usmc.mil	843-228-6461	Y	M-F 0800-1600	0	0	0	0	0	0	0	427	427	Waste Tank	AFFF Rinsate	NA	NA	NA
MCAS Beaufort		LQG	SC1750216169	NREAO, Bldg 1205	Chris Vaigneur	christopher.vaigneur@usmc.mil	843-228-6461	Y	M-F 0800-1600	1	8	0	0	0	0	0	0	445		Various	Various	Pre 6/16	NA
MCAS Beaufort		LQG	SC1750216169	NREAO, Bldg 1205	Chris Vaigneur	christopher.vaigneur@usmc.mil	843-228-6461	Y	M-F 0800-1600	0	7	0	0	0	0	0	0	385	Waste Drum	Debris c/w AFFF	NA	NA	NA
MCAS Beaufort		LQG	SC1750216169	NREAO, Bldg 1205	Chris Vaigneur	christopher.vaigneur@usmc.mil	843-228-6461	Y	M-F 0800-1600	0	0	0	0	0	3	0	0	165	Waste Drum	AFFF Rinsate	NA	NA	NA
MCAS Beaufort		LQG	SC1750216169	ATSI Warehouse 617	Molly Grissom	mgrissom@ahtna.net	843-228-6129	Y	M-F 0800-1600	0	12	0	0	0	0	0	0	660		Chem-Guard	3%	7/31/15	NA
MCAS Beaufort		LQG	SC1750216169	ATSI Warehouse 617	Molly Grissom	mgrissom@ahtna.net	843-228-6129	Y	M-F 0800-1600	0	3	0	0	0	0	0	0	165		Chem-Guard	3%	9/4/15	NA
MCAS Beaufort		LQG	SC1750216169	ATSI Warehouse 617	Molly Grissom	mgrissom@ahtna.net	843-228-6129	Y	M-F 0800-1600	1	0	0	0	0	0	0	0	5		Chem-Guard	3%	NA	NA
MCAS Beaufort		LQG	SC1750216169	ATSI Warehouse 617	Molly Grissom	mgrissom@ahtna.net	843-228-6129	Y	M-F 0800-1600	0	1	0	0	0	0	0	0	55		Buckeye	3%	NA	NA

**Attachment A**  
**AFFF Storage Inventories**  
**PFAS Preliminary Assessment**  
**MCAS Beaufort, Beaufort, South Carolina**

Unit	Location	Vehicle/System ID	POC	Installed Capacity (gal)	Notes
SFD	Bldg 595	Eng 88	Darran Vaughn	50	3M 6%; Manufacture Date Unknown
SFD	Bldg 595	Eng 89	Darran Vaughn	50	3M 6%; Manufacture Date Unknown
SFD	Bldg 595	Ladder 88	Darran Vaughn	50	3M 6%; Manufacture Date Unknown
ARFF	Bldg 1313	31-FSS (USMC 620630) (TM-280A)	Sgt Timothy Sunday	80	Unknown Brand and Manufacture Date
ARFF	Bldg 1313	31-FSS (USMC 620725) (TM-280A)	Sgt Timothy Sunday	80	Unknown Brand and Manufacture Date
ARFF	Bldg 1313	Truck 15 (P-19)	Sgt Timothy Sunday	130	Unknown Brand and Manufacture Date
ARFF	Bldg 1313	Truck 16 (P-19)	Sgt Timothy Sunday	130	Unknown Brand and Manufacture Date
ARFF	Bldg 1313	Truck 17 (P-19)	Sgt Timothy Sunday	130	Unknown Brand and Manufacture Date
ARFF	Bldg 1313	Truck 18 (P-19)	Sgt Timothy Sunday	130	Unknown Brand and Manufacture Date
MWSD-31	Bldg 1313	Truck 20 (P-19)	Sgt Timothy Sunday	130	Unknown Brand and Manufacture Date
MWSD-31	Bldg 1313	Truck 21 (P-19)	Sgt Timothy Sunday	130	Unknown Brand and Manufacture Date
MWSD-31	Bldg 1313	Truck 22 (P-19)	Sgt Timothy Sunday	130	Unknown Brand and Manufacture Date
MWSD-31	Bldg 1313	Truck 26 (P-19)	Sgt Timothy Sunday	130	Unknown Brand and Manufacture Date
MWSD-31	Bldg 1313	Truck 27 (P-19)	Sgt Timothy Sunday	130	Unknown Brand and Manufacture Date
MWSD-31	Bldg 1313	Truck 28 (P-19)	Sgt Timothy Sunday	130	Unknown Brand and Manufacture Date
MWSD-31	Bldg 1171	USMC 620583 (TM-280A)	Sgt Jason Moxley	80	Unknown Brand and Manufacture Date
MWSD-31	Bldg 1171	Twin-Agent Unit (450/100)	Sgt Jason Moxley	100	Unknown Brand and Manufacture Date
MWSD-31	Bldg 1171	Twin-Agent Unit (450/100)	Sgt Jason Moxley	100	Unknown Brand and Manufacture Date
MCAS Beaufort	Hangar 728	Fixed System	Joe Otterbine	1,100	Unknown Brand and Manufacture Date
MCAS Beaufort	Hangar 729	Fixed System	Joe Otterbine	1,100	Unknown Brand and Manufacture Date
MCAS Beaufort	Hangar 414	Fixed System	Joe Otterbine	6,000	Unknown Brand and Manufacture Date
MCAS Beaufort	Hangar 418	Fixed System	Joe Otterbine	3,200	Unknown Brand and Manufacture Date
MCAS Beaufort	Hangar 594	Fixed System	Joe Otterbine	3,200	Unknown Brand and Manufacture Date
MCAS Beaufort	Hangar 1084	Fixed System	Joe Otterbine	2,000	Unknown Brand and Manufacture Date
MCAS Beaufort	Hangar 1256	Fixed System	Joe Otterbine	300	Unknown Brand and Manufacture Date
MCAS Beaufort	Hangar 2145	Fixed System	Joe Otterbine	1,200	Unknown Brand and Manufacture Date
MCAS Beaufort	Hangar 3060	Fixed System	Joe Otterbine	1,800	Chemguard 3%; Manufactured 8/16
MCAS Beaufort	Hangar 1331	Fixed System	Joe Otterbine	1,600	

**Attachment A**  
**AFFF Storage Inventories**  
**PFAS Preliminary Assessment**  
**MCAS Beaufort, Beaufort, South Carolina**

USMC Fire Protection & Emergency Services AFFF in Fixed System Storage Tanks									
Location			AFFF Properties					Containment (Yes or No)	
Installation	Building Number	Room Number	AFFF Manufacture	Trade Name	Percentage	Manufactured Date	Quantity	Activation	Storage
MCAS Beaufort	728	Hanger Deck	N/A	AFFF	3%	N/A	1,100	No	No
MCAS Beaufort	729	Hanger Deck	N/A	AFFF	3%	N/A	1,100	No	No
MCAS Beaufort	414	Mechanical Rm	N/A	AFFF	3%	N/A	6,000	No	No
MCAS Beaufort	418	Mechanical Rm	N/A	AFFF	3%	N/A	3,200	No	No
MCAS Beaufort	594	RM 144 & 151	N/A	AFFF	3%	N/A	3,200	No	No
MCAS Beaufort	1084	Hanger Deck	N/A	AFFF	3%	N/A	2,000	No	No
MCAS Beaufort	1256	RM 208	N/A	AFFF	3%	N/A	300	Yes	Yes
MCAS Beaufort	2145	RM 128	N/A	AFFF	3%	N/A	1,200	Yes	Yes
MCAS Beaufort	2146		NA	AFFF	TBD	TBD	1,600	Yes	Yes



**Attachment A**  
**AFFF Storage Inventories**  
**PFAS Preliminary Assessment**  
**MCAS Beaufort, Beaufort, South Carolina**

USMC Fire Protection & Emergency Services AFFF in Apparatus or Equipment Storage Tanks							
Apparatus			AFFF Properties				
Installation	Vehicle ID	Vehicle Type	AFFF Manufacture	Trade Name	Percentage	Manufactured Date	Quantity (gallon)
MCAS Beaufort	620583	TM-280A	Unknown	NA	NA	N/A	80
MCAS Beaufort	Unknown	TAU	Unknown	NA	NA	N/A	100
MCAS Beaufort	Unknown	TAU	Unknown	NA	NA	N/A	100
						Total	280

## ATTACHMENT B

**SPILL REPORT FORM**  
Marine Corps Air Station, Beaufort, South Carolina

MEMORANDUM

From: Molly Grissom, ATSE ES + H mgr.

To: Environmental Affairs Officer

Via:

Subj: HM/HW/POL SPILL REPORT

Ref: (a)

1. In compliance with reference (a), the following report of a hazardous substance/petroleum, oil, lubricants (POL) spill/release is made:

- a. Date of incident: 7/25/2011 Time of Incident: 0926 hrs
- b. Person Reporting; Name: Vinny Francese Rank: CIV
- c. Location; Unit/ Activity: HUSH HOUSE Bldg: \_\_\_\_\_
- d. Substance: AFFF Amount (Gallons): 2 gals
- e. Description/details of events: Storage Tanks containing AFFF leaked at valves. AFFF escaped the containment berm + enter drain.
- f. On-scene Supervisor: Molly Grissom
- g. NOTIFICATION:
- |  | Work Hrs    | After Hrs | Time Called     |
|--|-------------|-----------|-----------------|
| (1) NREAO <u>MANDATORY</u>                 | (6461/6458) | (911)     | <u>0920 hrs</u> |
| (2) PMO Emergency Dispatcher (AS REQUIRED) |             | (911)     | <u>N/A</u>      |
- h. ADDITIONAL COMMENTS (Cause of spill/release and corrective actions taken):  
Valves on Storage tanks tightened, Spill cleaned using absorbent white cotton mts obtained from NREAO as well as recycleable blue mats. Drained covered to prevent any further intrusion. Additionally, berm was placed absorbent booms around inside perimeter of berm.

SUPERVISOR'S SIGNATURE: \_\_\_\_\_

*Molly Grissom*

**SPILL REPORT FORM**  
**MARINE CORPS AIR STATION BEAUFORT**

MEMORANDUM

From: R. Brown, MOTOR T MAINT.  
To: Environmental Affairs Officer  
Via:  
Subj: HM/HW/POL SPILL REPORT

Ref: (a)

1. In compliance with reference (a), the following report of a hazardous substance/petroleum, oil, lubricants (POL) spill/release is made:

a. Date of incident: Dec 8, 2011 Time of Incident: 1415

b. Person Reporting; Name: L. VINYFRANCESE Rank: CIV.

c. Location; Unit/Activity: MOTOR T MAINTENCE Bldg: 843

d. Substance: AFFF Amount(Gallons): 100 GAL

e. Description/details of events MECHANIC WAS TOLD THE TANK WAS EMPTY. WHEN HE REMOVED A PIPE FOR MAINTENANCE, THE AFFF SPILLED OUT. NREAO WAS CALLED AND RESPONDED IN TEN MINUTES.

f. On-scene Supervisor: MR R. BROWN

g. NOTIFICATION:

(1) NREAO MANDATORY

Work Hrs.  
(6461)

After Hrs.  
(911)

TIME CALLED  
1420

(2) PMO Emergency Dispatcher (AS REQUIRED) (911)

h. ADDITIONAL COMMENTS (Cause of spill/release and corrective actions taken): MOTOR T WORKERS CONTAINED THE SPILL. NREAO PROVIDED A PUMP TRUCK FOR CLEAN UP. THE SPILL WAS ON A HARD PAVED SURFACE. NOT ON DIRT SURFACE.

IN THE FUTURE TANKS WILL BE CHECKED BEFORE MAINTENANCE

SUPERVISOR'S  
SIGNATURE

R. Brown

**SPILL REPORT FORM**  
Marine Corps Air Station, Beaufort, South Carolina

MEMORANDUM

From: VMA(AW)-533  
To: Environmental Affairs Officer  
Via:  
Subj: HM/HW/POL SPILL REPORT

Ref: (a)

1. In compliance with reference (a), the following report of a hazardous substance/petroleum, oil, lubricants (POL) spill/release is made:

- a. Date of incident: 120626 Time of Incident: 1700
- b. Person Reporting; Name: Dougherty, Robert L Rank: CPL
- c. Location; Unit/Activity: 533 hangar Bldg: 418
- d. Substance: AFFF Foam Amount (Gallons): 7,100
- e. Description/details of events: AFFF dispensers went off, covering entire hangar floor.
- f. On-scene Supervisor: Capt. Waller
- g. NOTIFICATION:
- |  | Work Hrs | After Hrs | Time Called    |
|--|----------|-----------|----------------|
| (1) NREAO <b>MANDATORY</b>                 | (7370)   | (911)     | <u>On site</u> |
| (2) PMO Emergency Dispatcher (AS REQUIRED) |          | (911)     | <u>N/A</u>     |
- h. ADDITIONAL COMMENTS (Cause of spill/release and corrective actions taken):  
LCPL BRUDZYNSKI accidentally set off a fire alarm when walking past it. She claims that her shoulder nudged it as she turned around next to it.

SUPERVISOR'S SIGNATURE:  cm/6207



**SPILL REPORT FORM**  
Marine Corps Air Station, Beaufort, South Carolina

MEMORANDUM

From:

To: Environmental Affairs Officer

Via:

Subj: HM/HW/POL SPILL REPORT

Ref: (a)

1. In compliance with reference (a), the following report of a hazardous substance/petroleum, oil, lubricants (POL) spill/release is made:

- a. Date of incident: 2/12/16 Time of Incident: 0830
- b. Person Reporting; Name: Fire Dept Rank: \_\_\_\_\_
- c. Location; Unit/Activity: VMFA-122 Bldg: 414
- d. Substance: AFFF Amount (Gallons): 60
- e. Description/details of events: An AFFF tank was  
pumped down to avoid freezing damage
- f. On-scene Supervisor: Todd Lawson
- g. NOTIFICATION:
- |  | Work Hrs    | After Hrs | Time Called |
|--|-------------|-----------|-------------|
| (1) NREAO <u>MANDATORY</u>                 | (6461/6458) | (911)     | <u>0830</u> |
| (2) PMO Emergency Dispatcher (AS REQUIRED) |             | (911)     | _____       |
- h. ADDITIONAL COMMENTS (Cause of spill/release and corrective actions taken):  
AFFF deposited into Tank 979

SUPERVISOR'S SIGNATURE: \_\_\_\_\_

SPILL REPORT FORM  
MARINE CORPS AIR STATION BEAUFORT

From: VMPA-122  
To: Environmental Affairs Officer  
Via: MAG-31 Environmental

Date: 10/28/16

Subj: HM/HW/POL SPILL/RELEASE REPORT

Ref: (a) MCO P5090.2A  
(b) MCAS Beaufort Hazardous Waste Management Plan

1. In compliance with the references, the following report of a hazardous substance/petroleum, oil, lubricants (POL) spill/release is made:

a. Date of Incident: 10-28-16 Time of Incident: \_\_\_\_\_  
b. Location of Incident: 122 Hanger Bldg: 4114  
c. Person Reporting; Name: Cpl Walte Rank: Cpl  
d. Unit/Activity: 122 Hanger Fire Cannons Ext: 7475  
e. Substance: AFFF Amount (Gallons): 275 gal

f. Description/details of events On 10/27 AFFF Cannons  
went off at 1800

g. On-scene Supervisor: Sgt Young on 10/27 / Cpl Walte on 10/28

h. Notification: MANDATORY to call NTEAO and MAG HazMat for every spill!

	Work Hrs.	After Hrs.	TIME CALLED
1) NREAO (7907/7370)	(911)		<u>1800</u>
2) PMO Dispatcher (AS REQUIRED)	(911)		<u>1800</u>
3) MAG-31 HazMat (6528/6529)	(575-7140)		<u>1800</u>

i. ADDITIONAL COMMENTS (Cause of spill/release and corrective actions taken):

At 1733 on 10/27 Sgt Young called public works because A-F-F Cannon was leaking @ 1800 Cannons went off. 10/28 0730 TJM and Paco came to help clean the rest of the A-F-F up since it was contained the night before

SUPERVISOR'S SIGNATURE \_\_\_\_\_

FIRST ENDORSEMENT

MAG RPT # \_\_\_\_\_

From: MAG-31 Environmental  
To: NREAO

MAG-31 remarks: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



**SPILL REPORT FORM**  
Marine Corps Air Station, Beaufort, South Carolina

From:

To: NREAO, Environmental Compliance Section

Subj: SPILL REPORT

Ref: (a) ASO 4570.3A Ch. 2

1. In compliance with reference (a), the following report of a hazardous substance/petroleum, oil, lubricants (POL) spill/release is made:

- a. Date of Incident: 03 MAR 2018 Time of Incident: approx 073
- b. Person Reporting; Name: Michael Stephens Rank: Civ
- c. Location; Unit/ Activity: Hanger; H+HS Bldg: 1084
- d. Substance: Ansulite 370 AFFE Amount (Gallons): 2 320
- e. Cause/Recovery & Clean-up: Fire extinguishing agent released by cannon. Fire Dept. cleaned Hanger with fresh water. NREAO + PMO notified by MCAS Beaufort Fire Dept.

f. NOTIFICATION:	Work Hrs	After Hrs	Time Called
(1) NREAO <b>MANDATORY</b>	(6461/6458)	(911)	<u>?</u>
(2) PMO Emergency Dispatcher	***	(911)	<u>?</u>

SUPERVISOR'S SIGNATURE: 

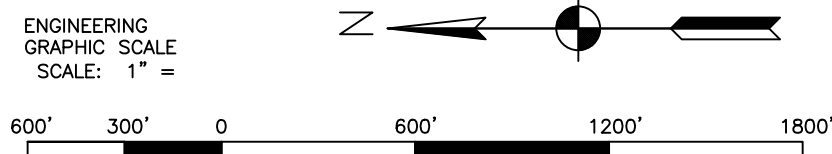
## ATTACHMENT C





BLDG	GRID	BLDG	GRID	BLDG	GRID	BLDG	GRID	BLDG	GRID	BLDG	GRID	BLDG	GRID
1077	Y12	1130	I14	1181	W16	1243	R11	1338	T12	3023	Q14		
1078	R11	1131	O7	1183	W16	1244	V13	1402	S20	3024	O9		
1080	L12	1133	U15	1183	W16	1245	V12	1497	V9	3025	M11		
1081	V15	1134	R9	1184	V16	1246	V12	2070	K10	3027	U15		
1082	T13	1135	R9	1186	T13	1247	V12	2071	O11	3031	S12		
1083	S13	1136	R10	1191	S11	1248	V13	2072	T14	3032	S12		
1084	R9	1138	R11	1196	O7	1251	I11	2075	S17	3033	S12		
1085	V8	1140	V12	1197	I11	1252	S11	2076	V8	3034	S12		
1086	V8	1142	V11	1202	V11	1253	S10	2077	V9	3035	S12		
1088	S9	1143	L7	1204	V15	1254	S10	2078	O7	3036	S12		
1089	L12	1144	R10	1205	O7	1255	W15	2080	V11	3040	T9		
1091	M10	1146	X12	1206	V15	1256	S12	2082	S10	3043	F17		
1092	M10	1147	W13	1207	R11	1258	O7	2085	T10	3044	M16		
1093	W16	1148	X12	1208	S9	1260	T10	2088	W16	3045	S12		
1094	W16	1150	W9	1217	W13	1263	Q11	2089	U12	3048	T10		
1095	V10	1151	T8	1222	W17	1268	K10	2090	U12	3060	R12		
1100	V9	1152	W15	1213	S12	1269	P8	2091	I14	3061	S12		
1102	V16	1153	W15	1215	S9	1270	R11	2093	U11	3063	U14		
1103	S9	1156	T8	1218	V11	1277	R11	2094	I14				
1107	U8	1261	I14	1219	V12	1283	U10	2095	U12				
1108	V10	1162	W16	1222	Q18	1284	U11	2097	R18				
1112	L7	1166	O13	1226	T14	1307	I14	2098	R18				
1113	L7	1171	W16	1231	V12	1310	O14	2145	U9				
1114	R11	1172	T9	1236	W15	1313	Q11	2146	S12				
1116	V15	1173	T9	1236A	W15	1325	Q11	2199	U11				
1117	R11	1174	W12	1237	V8	1326	R9	3009	T10				
1121	V12	1176	I17	1238	Y13	1328	T7	3012	V11				
1122	V13	1178	V16	1239	Y13	1331	P8	3021	L15				
1129	M16	1179	W16	1240	O7	1333	V10	3022	M13				
		1180	W16	1242	X17								

BLDG	GRID	BLDG	GRID	BLDG	GRID	BLDG	GRID
74	R11	602	V10	746	P11	968	R11
154	Y11	606	N12	747	P11	970	S20
259	O12	607	Q14	769	Y11	976	V15
260	O13	608	O14	776	P10	976	P8
262	N13	609	N7	780	V16	979	T12
311	X17	610	U13	782	V10	980	I11
411	T8	611	T11	784	R10	982	X16
402	T8	612	T9	785	R10	986	S20
403	T8	613	T8	786	R10	987	X16
401	R11	614	T11	790	V12	988	L6
409	U13	615	T9	795	S18	989	W11
410	R17	616	U15	799	V17	991	Y12
411	T11	617	U15	807	V17	992	V16
414	T10	618	U14	825	U8	1001	W16
418	S9	620	U14	834	L9	1002	R16
419	K22	621	U14	835	L9	1003	V15
420	K22	622	U14	837	L9	1004	P7
421	K10	623	U14	840	J15	1006	P7
422	J12	624	U14	843	V15	1007	T14
423	I12	625	U15	844	I13	1010	Y12
424	J13	626	V15	846	J13	1011	W16
425	J13	628	T14	847	J13	1013	U15
427	T12	628	T14	848	J12	1014	S11
429	R11	649	O12	849	J12	1015	V15
430	T12	658	Q18	850	K10	1016	V16
431	R18	659	V15	851	K10	1020	R10
432	R18	660	W16	852	K10	1021	R10
433	R18	661	W16	853	K10	1023	T13
444	L15	662	W16	854	L10	1024	I11
445	O14	665	L14	855	L10	1025	T10
446	N14	691	R10	856	R11	1028	X16
447	N7	696	V8	857	S9	1030	O7
448	N7	698	Y13	860	Q11	1031	T9
449	N7	702	R10	861	Q10	1032	V13
550	R12	703	U11	890	V9	1033	U12
551	T14	704	V10	895	U12	1034	V10
553	V11	707	V12	898	O7	1035	W16
554	S17	708	O11	906	O15	1036	U15
555	T10	711	Y12	907	O15	1039	S12
564	V10	714	V15	913	X17	1042	U10
565	V9	716	R11	915	M9	1043	V8
566	V10	728	R10	916	O13	1046	O11
567	S20	720	T11	921	S9	1049	S10
568	S20	722	M16	923	R11	1050	U15
569	S20	723	R9	924	S11	1051	V15
570	S20	727	R10	931	S20	1053	V9
572	V13	728	R10	932A	W12	1054	T11
573	V13	729	R11	933M	W12	1061	V9
575	W13	730	I14	934	W12	1062	S11
576	R18	731	I14	940	U12	1063	V9
577	W12	733	J10	941	T14	1064	V16
584	T10	734	K11	942	T14	1065	V16
585	T11	735	K11	950	S17	1066	V16
594	S11	736	J12	951	R11	1067	V16
596	U11	737	J12	953	R10	1068	V16
597	U0	738	I13	954	V15	1070	V15
598	U12	740	J17	956	Q18	1071	M11
599	U11	741	J17	957	T11	1075	V11
600	Q11	744	T8	965	I11	1076	M6
601	V10			967	R11		



PW DWG NO.	DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND	
DES	MARINE CORPS AIR STATION, BEAUFORT, S.C.	
DR		
CHK		
SUPV		
SATISFACTORY TO	DATE	CODE IDENT NO.   NAVFAC DRAWING NO.
APPROVED	DATE	80091
OFFICER IN CHARGE		CONSTR.CONTR.NO.   N62467- -C-
SCALE		SHEET OF



## ATTACHMENT D

# NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number

SC1750215158

2. Page 1 of

3. Emergency Response Phone

843-228-7121

4. Waste Tracking Number

06102015-01

5. Generator's Name and Mailing Address

MARINE CORPS AIR STATION/ENVIRONMENTAL OFFICE  
P.O. BOX 55024  
BEAUFORT, SC 29504

Generator's Site Address (if different than mailing address)

Generator's Phone:

843-228-6458

6. Transporter 1 Company Name

FERIN VAC

U.S. EPA ID Number

SCR000771899

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

ABM AMERICAN BIO MASS  
36 CLEARWATER DRIVE  
WALTERBORO, SC 29488

U.S. EPA ID Number

152630-2001

Facility's Phone:

843-893-2580/843-595-5764

9. Waste Shipping Name and Description

10. Containers

No.

Type

11. Total  
Quantity

12. Unit  
Wt./Vol.

1. AER-O-METER NON-HAZARDOUS/NON-REGULATED #USW-07004

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4.

13. Special Handling Instructions and Additional Information

NEEDS CD SENT TO US WASTE 24 HR EMERGENCY CONTACT BILLY DRAWDY 843-228-7121 CO110145  
CONTRACT #M60169-15-P-SAD8

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offoror's Printed/Typed Name

Timothy Whaley

Signature

Timothy Whaley

Month Day Year  
6 10 15

15. International Shipments

☐ Import to U.S.

☐ Export from U.S.

Port of entry/exit:

Date leaving U.S.:

Transporter Signature (for exports only):

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Emmick Cromwell

Signature

[Signature]

Month Day Year  
6 10 15

Transporter 2 Printed/Typed Name

Signature

[Signature]

Month Day Year  
6 10 15

17. Discrepancy

17a. Discrepancy Indication Space

☐ Quantity

☐ Type

☐ Residue

☐ Partial Rejection

☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Robert Hogan

Signature

[Signature]

Month Day Year  
6 10 15

American Bio-Mass

Permit # 152630-2001

36 Clearwater Drive

P O Box 704

Walterboro, SC 29488

Phone: (843) 893-2580

Fax: (843) 893-3328

CERTIFICATE OF DISPOSAL

American Bio Mass LLC,

Hereby certifies all materials described in

Manifest / Bill of Lading # 06102015-01

Were disposed of in compliance with all applicable local,  
state and federal regulations on the date of:

JUNE 10, 2015

For:

MARINE CORPS AIR STATION/ENVIRONMENTAL  
OFFICE

Joel R. Hogan

General Manager

Of

American Bio Mass, LLC



**NON-HAZARDOUS  
WASTE MANIFEST**

1. Generator ID Number

SC1750216169

2. Page 1 of

3. Emergency Response Phone

843-228-7121

4. Waste Tracking Number

20150609-02

5. Generator's Name and Mailing Address

MARINE CORPS AIR STATION/ENVIRONMENTAL OFFICE  
P.O. BOX 55024  
BEAUFORT, SC 29904

Generator's Site Address (if different than mailing address)

Generator's Phone:

843-228-6458

6. Transporter 1 Company Name

Fenn VAC

U.S. EPA ID Number

SCR 000771899

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

ABM-AMERICAN BIO MASS  
36 CLEARWATER DRIVE  
WALTERBORO, SC 29488

U.S. EPA ID Number

152533 2001

Facility's Phone:

843-803-2580/843-560-5764

9. Waste Shipping Name and Description

10. Containers

No.

Type

11. Total  
Quantity

12. Unit  
Wt./Vol.

1. AER-O-METER NON-HAZARDOUS/NON-REGULATED #USW-07004

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13. Special Handling Instructions and Additional Information

NEEDS CD SENT TO US WASTE 24 HR EMERGENCY CONTACT BILLY DRAWDY 843-228-7121 CD110146

CONTRACT # M60169-15-P-SAQ8

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's Offeror's Printed/Typed Name

Timothy Whaley

Signature

Timothy Whaley

Month Day Year

6 9 15

15. International Shipments

☐ Import to U.S.

☐ Export from U.S.

Port of entry/exit:

Date leaving U.S.:

Transporter Signature (for exports only):

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Linda Cromwell

Signature

Linda Cromwell

Month Day Year

6 9 15

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space

☐ Quantity

☐ Type

☐ Residue

☐ Partial Rejection

☐ Full Rejection

Manifest Reference Number:

U.S. EPA ID Number

17b. Alternate Facility (or Generator)

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17c

Printed/Typed Name

Robert Hogan

Signature

Robert Hogan

Month Day Year

6 9 15



American Bio-Mass

Permit # 152630-2001

36 Clearwater Drive

P O Box 704

Walterboro, SC 29488

Phone: (843) 893-2580

Fax: (843) 893-3328

CERTIFICATE OF DISPOSAL

American Bio Mass LLC,  
Hereby certifies all materials described in  
Manifest / Bill of Lading # 20150609-02  
Were disposed of in compliance with all applicable local,  
state and federal regulations on the date of:

JUNE 9, 2015

For:

MARINE CORPS AIR STATION ENVIRONMENTAL  
OFFICE

Joel R. Hogan  
General Manager  
Of  
American Bio Mass, LLC

**NON-HAZARDOUS  
WASTE MANIFEST**

1. Generator ID Number

SC1750216169

2. Page 1 of

3. Emergency Response Phone

843-228-7121

4. Waste Tracking Number

20150609-01

5. Generator's Name and Mailing Address

MARINE CORPS AIR STATION/ENVIRONMENTAL OFFICE  
P.O. BOX 55024  
BEAUFORT, SC 29904

Generator's Site Address (if different than mailing address)

Generator's Phone:

843-228-6458

6. Transporter 1 Company Name

Fenn VAC

U.S. EPA ID Number

SCR000771899

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

ABM AMERICAN BIO MASS  
36 CLEARWATER DRIVE  
WALTERBORO, SC 29488

U.S. EPA ID Number

152530-2001

Facility's Phone:

843-893-2580/843-500-5764

9. Waste Shipping Name and Description

10. Containers

No.

Type

11. Total  
Quantity

12. Unit  
Wt./Vol.

1. AER-O-METER NON-HAZARDOUS/NON-REGULATED #JISW-07004

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13. Special Handling Instructions and Additional Information

NEEDS CD SENT TO US WASTE 24 HR EMERGENCY CONTACT BILLY DRAWDY 843-228-7121 CO110146

CONTRACT # M60169 15-P-SA08

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offor's Printed/Typed Name

Timothy Whaley

Signature

Timothy Whaley

Month Day Year  
6 9 15

15. International Shipments

☐ Import to U.S.

☐ Export from U.S.

Port of export:

Date leaving U.S.:

Transporter Signature (for exports only):

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

LAMAR Cromwell

Signature

L-C

Month Day Year  
6 9 15

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space

☐ Quantity

☐ Type

☐ Residue

☐ Partial Rejection

☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Nathan Hudgins

Signature

Nathan Hudgins

Month Day Year  
6 9 15

American Bio-Mass

Permit # 152630-2001

36 Clearwater Drive

P O Box 704

Walterboro, SC 29488

Phone: (843) 893-2580

Fax: (843) 893-3328

CERTIFICATE OF DISPOSAL

American Bio Mass LLC,  
Hereby certifies all materials described in  
Manifest / Bill of Lading # 20150609-01  
Were disposed of in compliance with all applicable local,  
state and federal regulations on the date of:

JUNE 9, 2015

For:

MARINE CORPS AIR STATION ENVIRONMENTAL  
OFFICE

Joel R. Hogan  
General Manager  
Of  
American Bio Mass, LLC



<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number SC1750218169		2. Page 1 of		3. Emergency Response Phone 843-228-7121		4. Waste Tracking Number 20150608-11	
		5. Generator's Name and Mailing Address MARINE CORPS AIR STATION/ENVIRONMENTAL OFFICE P.O. BOX 55024 BEAUFORT, SC 29904 Generator's Phone: 843-228-6458		Generator's Site Address (if different than mailing address)					
6. Transporter 1 Company Name <b>FENN VAC LLe</b>		U.S. EPA ID Number <b>SCR 000 771889</b>							
7. Transporter 2 Company Name		U.S. EPA ID Number							
8. Designated Facility Name and Site Address ABM-AMERICAN BIO MASS 36 CLEARWATER DRIVE WALTERBORO, SC 29488 Facility's Phone: 843-893-2580/843-598-5764		U.S. EPA ID Number 152630-2001							
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity		12. Unit Wt./Vol.			
		No.	Type						
1. AER-O-METER NON HAZARDOUS/NON REGULATED #USW-07004		01	TT	5000		G			
2.									
3.									
4.									
13. Special Handling Instructions and Additional Information NEEDS CD SENT TO US WASTE 24 HR EMERGENCY CONTACT BILLY DRAWDY 843-228-7121 CO110145 CONTRACT # M60169-15-P-SA08									
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.									
Generator's/Offor's Printed/Typed Name <b>Timothy Whaley</b>		Signature <i>Timothy Whaley</i>		Month <b>6</b>		Day <b>8</b>		Year <b>15</b>	
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.		Port of entry/exit:		Date leaving U.S.:					
16. Transporter Acknowledgment of Receipt of Materials		Transporter 1 Printed/Typed Name <b>LAMAR Chromwell</b>		Signature <i>Lamar Chromwell</i>		Month <b>6</b>		Day <b>8</b>	
		Transporter 2 Printed/Typed Name		Signature		Month		Day	
						Year			
17. Discrepancy									
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection									
17b. Alternate Facility (or Generator) Manifest Reference Number: U.S. EPA ID Number									
Facility's Phone:									
17c. Signature of Alternate Facility (or Generator) Month Day Year									
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a									
Printed/Typed Name <b>Robert Hogun</b>		Signature <i>Robert Hogun</i>		Month <b>6</b>		Day <b>8</b>		Year <b>15</b>	

American Bio-Mass

Permit # 152630-2001

36 Clearwater Drive

P O Box 704

Walterboro, SC 29488

Phone: (843) 893-2580

Fax: (843) 893-3328

CERTIFICATE OF DISPOSAL

American Bio Mass LLC,  
Hereby certifies all materials described in  
Manifest / Bill of Lading # 20150608-11  
Were disposed of in compliance with all applicable local,  
state and federal regulations on the date of:

JUNE 8, 2015

For:

MARINE CORPS AIR STATION ENVIRONMENTAL  
OFFICE

Joel R. Hogan  
General Manager  
Of  
American Bio Mass, LLC



NON-HAZARDOUS WASTE MANIFEST		1. Generator ID Number CFSOG	2. Page 1 of	3. Emergency Response Phone 843-228-6458	4. Waste Tracking Number 20150608-09
5. Generator's Name and Mailing Address MARINE CORPS AIR STATION P.O. BOX 55024 BEAUFORT, SC 29904		Generator's Site Address (if different than mailing address)			
Generator's Phone: 843-228-6458					
6. Transporter 1 Company Name FERR VAC		U.S. EPA ID Number SCK 000771 899			
7. Transporter 2 Company Name		U.S. EPA ID Number			
8. Designated Facility Name and Site Address ABM-AMERICAN BIO MASS 38 CLEARWATER DRIVE WALTERBORO, SC 29488		U.S. EPA ID Number 152630-2001			
Facility's Phone: 843-893-2580/843-599-5764					
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.
		No.	Type		
1. AER-O-METER NON-HAZARDOUS/NON-REGULATED #USW-07004		01	IT	5000	G
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4.					
13. Special Handling Instructions and Additional Information NEEDS CD SENT TO US WASTE 24 HR EMERGENCY CONTACT RALPH DAGIN 843-228-6458 CO110146 CONTRACT # M80169-15-P-PSAC					
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.					
Generator's/Offeror's Printed/Typed Name Timothy Whaley		Signature Timothy Whaley		Month 6	Day 8
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.		Port of entry/exit: Date leaving U.S.:		Year 15	
Transporter Signature (for exports only):					
16. Transporter Acknowledgment of Receipt of Materials					
Transporter 1 Printed/Typed Name Lamar Cromwell		Signature Lamar Cromwell		Month 6	Day 8
Transporter 2 Printed/Typed Name		Signature		Year 15	
17. Discrepancy					
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection					
Manifest Reference Number:					
17b. Alternate Facility (or Generator) U.S. EPA ID Number					
Facility's Phone:					
17c. Signature of Alternate Facility (or Generator) Month Day Year					
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a					
Printed/Typed Name Robert Hogan		Signature Robert Hogan		Month 6	Day 8
				Year 15	

American Bio-Mass

Permit # 152630-2001

36 Clearwater Drive

P O Box 704

Walterboro, SC 29488

Phone: (843) 893-2580

Fax: (843) 893-3328

CERTIFICATE OF DISPOSAL

American Bio Mass LLC,

Hereby certifies all materials described in

Manifest / Bill of Lading # 20150608-09

Were disposed of in compliance with all applicable local,  
state and federal regulations on the date of:

JUNE 8, 2015

For:

MARINE CORPS AIR STATION

Joel R. Hogan

General Manager

Of

American Bio Mass, LLC



<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number <b>QES0G</b>		2. Page 1 of		3. Emergency Response Phone <b>843-228-6458</b>		4. Waste Tracking Number <b>20150605-03</b>	
		5. Generator's Name and Mailing Address <b>NAVY CORPS AIR STATION P.O. BOX 55024 SEAFORT, SC 29584</b>		Generator's Site Address (if different than mailing address)					
Generator's Phone: <b>843-228-6458</b>		6. Transporter 1 Company Name <b>FENN VAC LLC</b>				U.S. EPA ID Number <b>SCR 020 771899</b>			
		7. Transporter 2 Company Name				U.S. EPA ID Number			
8. Designated Facility Name and Site Address <b>AEM-AMERICAN BIO MASS 38 CLEARWATER DRIVE WALTERSBORO, SC 29488</b>		U.S. EPA ID Number <b>152630-2001</b>							
Facility's Phone: <b>843-893-2880/843-893-8784</b>									
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.				
		No.	Type						
1. <b>AERO-METER NON-HAZARDOUS/NON-REGULATED #USW-07314</b>		<b>01</b>	<b>FT</b>	<b>5000</b>					
2.									
3.									
4.									
13. Special Handling Instructions and Additional Information <b>NEEDS COSENT TO US WASTE 24-HR EMERGENCY CONTACT RALPH DAGIN 843-228-6458 CO1130145 CONTRACT #M60188-1L-PPAC</b>									
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.									
Generator's/Offlor's Printed/Typed Name <b>Timothy Whaley</b>		Signature <i>Timothy Whaley</i>		Month <b>6</b>		Day <b>5</b>		Year <b>15</b>	
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.		Port of entry/exit: Date leaving U.S.:							
16. Transporter Acknowledgment of Receipt of Materials									
Transporter 1 Printed/Typed Name <b>LAWRENCE CROMWELL</b>		Signature <i>L. Cromwell</i>		Month <b>6</b>		Day <b>5</b>		Year <b>15</b>	
Transporter 2 Printed/Typed Name		Signature		Month		Day		Year	
17. Discrepancy									
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection									
Manifest Reference Number:									
17b. Alternate Facility (or Generator) U.S. EPA ID Number									
Facility's Phone:									
17c. Signature of Alternate Facility (or Generator) Month Day Year									
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in item 17a									
Printed/Typed Name <b>Robert Hogan</b>		Signature <i>Robert Hogan</i>		Month <b>6</b>		Day <b>5</b>		Year <b>15</b>	



American Bio-Mass

Permit # 152630-2001

36 Clearwater Drive

P O Box 704

Walterboro, SC 29488

Phone: (843) 893-2580

Fax: (843) 893-3328

CERTIFICATE OF DISPOSAL

American Bio Mass LLC,

Hereby certifies all materials described in

Manifest / Bill of Lading # 20150605-03

Were disposed of in compliance with all applicable local,  
state and federal regulations on the date of:

JUNE 5, 2015

For:

MARINE CORPS AIR STATION

Joel R. Hogan

General Manager

Of

American Bio Mass, LLC

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number	
	CESQG		843-228-6458	20150605-04	
5. Generator's Name and Mailing Address		Generator's Site Address (if different than mailing address)			
MARINE CORPS AIR STATION P.O. BOX 55024 BEAUFORT, SC 29904					
Generator's Phone: 843-228-6458					
6. Transporter 1 Company Name		U.S. EPA ID Number			
Fenn VAC LLC		SCR 000771 899			
7. Transporter 2 Company Name		U.S. EPA ID Number			
8. Designated Facility Name and Site Address		U.S. EPA ID Number			
ABM-AMERICAN BIO MASS 36 CLEARWATER DRIVE WALTERBORO, SC 29488		152630-2001			
Facility's Phone: 843-823-2580/843-509-5764					
9. Waste Shipping Name and Description	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	
	No.	Type			
	1. AER-O-METER NON-HAZARDOUS/NON-REGULATED #USW-07004	01	TT	5000	
	2.				
	3.				
4.					
13. Special Handling Instructions and Additional Information					
NEEDS CD SENT TO US WASTE 24HR EMERGENCY CONTACT RALPH DAGIN 843-228-6458 CD110146 CONTRACT #M60169 15-F-PSAC					
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.					
Generator's/Offor's Printed/Typed Name		Signature	Month	Day	Year
Timothy Whaley		Timothy Whaley	6	5	15
15. International Shipments	<input type="checkbox"/> Import to U.S.	<input type="checkbox"/> Export from U.S.	Port of entry/exp. Date leaving U.S.:		
Transporter Signature (for exports only):					
16. Transporter Acknowledgment of Receipt of Materials					
Transporter 1 Printed/Typed Name		Signature	Month	Day	Year
LAMAR Cromwell		J-P	6	5	15
Transporter 2 Printed/Typed Name		Signature	Month	Day	Year
17. Discrepancy					
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection					
Manifest Reference Number:					
17b. Alternate Facility (or Generator)		U.S. EPA ID Number			
Facility's Phone:					
17c. Signature of Alternate Facility (or Generator)		Month Day Year			
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a					
Printed/Typed Name		Signature	Month	Day	Year
Nathan Hudgins		Nathan Hudgins	6	5	15

American Bio-Mass

Permit # 152630-2001

36 Clearwater Drive

P O Box 704

Walterboro, SC 29488

Phone: (843) 893-2580

Fax: (843) 893-3328

CERTIFICATE OF DISPOSAL

American Bio Mass LLC,

Hereby certifies all materials described in

Manifest / Bill of Lading # 20150605-04

Were disposed of in compliance with all applicable local,  
state and federal regulations on the date of:

JUNE 5, 2015

For:

MARINE CORPS AIR STATION

Joel R. Hogan

General Manager

Of

American Bio Mass, LLC



**NON-HAZARDOUS  
WASTE MANIFEST**

1. Generator ID Number

SC1750216169

2. Page 1 of

3. Emergency Response Phone

843-228-7121

4. Waste Tracking Number

06102015-02

Generator's Site Address (if different than mailing address)

5. Generator's Name and Mailing Address

MARINE CORPS AIR STATION/ENVIRONMENTAL OFFICE  
P.O. BOX 55024  
BEAUFORT, SC 29904

Generator's Phone:

843-228-6458

6. Transporter 1 Company Name

Fenn VA

U.S. EPA ID Number

SCRC000771899

U.S. EPA ID Number

7. Transporter 2 Company Name

U.S. EPA ID Number

152630-2001

8. Designated Facility Name and Site Address

ABM-AMERICAN BIO MASS  
36 CLEARWATER DRIVE  
WALTERBORO, SC 29488

Facility's Phone:

843-893-2580/843-550-5764

10. Containers

No.

Type

11. Total  
Quantity

12. Unit  
Wt./Vol.

9. Waste Shipping Name and Description

1. AER-O-METER NON-HAZARDOUS/NON-REGULATED #USW-07004

01

TT

2502

G

2.

3.

4.

13. Special Handling Instructions and Additional Information

NEEDS CD SENT TO US WASTE 24HR EMERGENCY CONTACT BILLY DRAWDY 843-228-7121 CG110146  
CONTRACT #MAG169 15-P-9A08

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offor's Printed/Typed Name

Timothy Whaley

Signature

Timothy Whaley

Month Day Year

6 10 15

15. International Shipments

☐ Import to U.S.

☐ Export from U.S.

Port of entry/exi  
Date leaving U.S.:

Transporter Signature (for exports only):

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

La Mon CRomwell

Signature

[Signature]

Month Day Year

6 10 15

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space

☐ Quantity

☐ Type

☐ Residue

☐ Partial Rejection

☐ Full Rejection

Manifest Reference Number:

U.S. EPA ID Number

17b. Alternate Facility (or Generator)

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Robert Hogan

Signature

[Signature]

Month Day Year

6 10 15

DESIGNATED FACILITY TO GENERATOR

American Bio-Mass

Permit # 152630-2001

36 Clearwater Drive

P O Box 704

Walterboro, SC 29488

Phone: (843) 893-2580

Fax: (843) 893-3328

CERTIFICATE OF DISPOSAL

American Bio Mass LLC,

Hereby certifies all materials described in

Manifest / Bill of Lading # 06102015-02

Were disposed of in compliance with all applicable local,  
state and federal regulations on the date of:

JUNE 10, 2015

For:

MARINE CORPS AIR STATION/ENVIRONMENTAL  
OFFICE

Joel R. Hogan

General Manager

Of

American Bio Mass, LLC



**NON-HAZARDOUS  
WASTE MANIFEST**

1. Generator ID Number  
SC1750216169

2. Page 1 of 1  
3. Emergency Response Phone  
843-228-7121

4. Waste Tracking Number  
3351

5. Generator's Name and Mailing Address  
MARINE CORPS AIR STATION  
HWY 21 BLDG 1205  
BEAUFORT, SC 29904

Generator's Site Address (if different than mailing address)  
HWY 21

Generator's Phone: 843-228-7121

6. Transporter 1 Company Name  
Fenn-Vac

U.S. EPA ID Number  
SC R000771859

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address  
ABM-AMERICAN BIO MASS  
35 CLEARWATER DRIVE  
WALTERBORO, SC 29488

U.S. EPA ID Number  
152630-2001

Facility's Phone: 843-893-2580/843-599-5754

9. Waste Shipping Name and Description

10. Containers

No. Type

11. Total  
Quantity

12. Unit  
Wt./Vol.

1. AER-O-METER NON HAZARDOUS/NON REGULATED #USW-07004  
AFFF/WATER

1 11 TT 5000 41,700 P

2.

3.

4.

13. Special Handling Instructions and Additional Information

NEEDS CD SENT TO US WASTE 24 HR EMERGENCY CONTACT RALPH DAGIN 843-228-5456 CD

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offero's Printed/Typed Name

W.G. Duke, Jr.

Signature

[Signature]

Month Day Year  
01 30 17

15. International Shipments ☐ Import to U.S. ☐ Export from U.S.

Port of entry/exit:

Transporter Signature (for exports only):

Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Signature

Month Day Year

Joe F Scott

[Signature]

1 30 17

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space

☐ Quantity

☐ Type

☐ Residue

☐ Partial Rejection

☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in item 17c

Printed/Typed Name

Signature

Month Day Year

Robert Hogan

[Signature]

1 30 17

American Bio-Mass

Permit # 152630-2001

36 Clearwater Drive

P O Box 704

Walterboro, SC 29488

Phone: (843) 893-2580

Fax: (843) 893-3328

CERTIFICATE OF DISPOSAL

American Bio Mass LLC,  
hereby certifies all materials described in  
Manifest / Bill of Lading # 3351  
were disposed of in compliance with all applicable local,  
state and federal regulations on the date of:

January 30, 2017

For:

MARINE CORPS AIR STATION

Joel R. Hogan  
General Manager  
of  
American Bio Mass, LLC



GENERATOR	<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number SC1750216169		2. Page 1 of 1		3. Emergency Response Phone <del>843-228-7121</del>		4. Waste Tracking Number <b>3352</b>		
	5. Generator's Name and Mailing Address MARINE CORPS AIR STATION HWY 21 BLDG 1205 BEAUFORT, SC 29904					Generator's Site Address (if different than mailing address) <b>HWY 21</b>					
	Generator's Phone: <del>843-228-5554</del> <b>843-228-7121</b>										
	6. Transporter 1 Company Name <b>Fenn- Mac</b>					U.S. EPA ID Number <b>SC R000771899</b>					
	7. Transporter 2 Company Name					U.S. EPA ID Number					
	8. Designated Facility Name and Site Address ABM-AMERICAN BIO MASS 36 CLEARWATER DRIVE WALTERBORO, SC 29488					U.S. EPA ID Number 152530-2001					
	Facility's Phone: <b>843-893-2580 / 843-599-5764</b>										
	9. Waste Shipping Name and Description					10. Containers		11. Total Quantity		12. Unit Wt./Vol.	
						No. Type					
	1. AER-O-METER NON HAZARDOUS/NON REGULATED #USW-07004 <b>AFFF / WATER</b>					1 TT		15.00		P	
2.											
3.											
4.											
13. Special Handling Instructions and Additional Information <b>NEEDS CD SENT TO US WASTE 24 HR EMERGENCY CONTACT RALPH DAGIN 843-228-6456 CD</b>											
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.											
Generator's/Offoror's Printed/Typed Name <b>Timothy Whaley</b> Signature <b>Timothy Whaley</b> Month <b>01</b> Day <b>30</b> Year <b>17</b>											
INT'L	15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: Date leaving U.S.:										
	Transporter Signature (for exports only):										
TRANSPORTER	16. Transporter Acknowledgment of Receipt of Materials										
	Transporter 1 Printed/Typed Name <b>Jeff Scott</b> Signature <b>Jeff Scott</b> Month <b>1</b> Day <b>30</b> Year <b>17</b>										
Transporter 2 Printed/Typed Name Signature Month Day Year											
DESIGNATED FACILITY	17. Discrepancy										
	17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection										
	17b. Alternate Facility (or Generator) Manifest Reference Number: U.S. EPA ID Number										
	Facility's Phone:										
	17c. Signature of Alternate Facility (or Generator) Month Day Year										
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a											
Printed/Typed Name <b>Robert Hogan</b> Signature <b>Robert Hogan</b> Month <b>1</b> Day <b>30</b> Year <b>17</b>											

American Bio-Mass

Permit # 152630-2001

36 Clearwater Drive

P O Box 704

Walterboro, SC 29488

Phone: (843) 893-2580

Fax: (843) 893-3328

CERTIFICATE OF DISPOSAL

American Bio Mass LLC,  
hereby certifies all materials described in  
7Manifest / Bill of Lading # 3352  
were disposed of in compliance with all applicable local,  
state and federal regulations on the date of:

January 30, 2017

For:

MARINE CORPS AIR STATION

Joel R. Hogan  
General Manager  
of  
American Bio Mass, LLC





GENERATOR	NON-HAZARDOUS WASTE MANIFEST		1. Generator ID Number SC1760216169		2. Page 1 of 1		3. Emergency Response Phone 843-225-5554		4. Waste Tracking Number 1116171205			
	5. Generator's Name and Mailing Address MARINE CORPS AIR STATION HWY 21 BLDG 1205 BEAUFORT, SC 29906 Generator's Phone: 843-225-5554						Generator's Site Address (if different than mailing address)					
	6. Transporter 1 Company Name Fenn-Van						U.S. EPA ID Number SCR000271899					
	7. Transporter 2 Company Name						U.S. EPA ID Number					
TRANSPORTER	8. Designated Facility Name and Site Address HERITAGE-WTI, INC. 1280 SAINT GEORGE STREET UNIT 1 EAST LIVERPOOL, OH 43920-3461 Facility's Phone: 800-545-7695						U.S. EPA ID Number OH05980513541					
	9. Waste Shipping Name and Description				10. Containers		11. Total Quantity		12. Unit			
					No. Type		Quantity		WL/Vol.			
	1. AFFF & WATER NON HAZARDOUS/NON REGULATED #161189-S				1 TT		3000		G			
DESIGNATED FACILITY	13. Special Handling Instructions and Additional Information NEEDS CO SENT TO US WASTE 24 HR EMERGENCY CONTACT RALPH DAGINI 843-225-5554 CO				T134804							
	14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.											
	Generator's/Officer's Printed/Typed Name Corey Jackson						Signature 		Month Day Year 10/16/17			
	15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: Date leaving U.S.:											
DESIGNATED FACILITY	16. Transporter Acknowledgment of Receipt of Materials											
	Transporter 1 Printed/Typed Name Jesse Scott						Signature 		Month Day Year 10/16/17			
	Transporter 2 Printed/Typed Name						Signature		Month Day Year			
	17. Discrepancy											
DESIGNATED FACILITY	17a. Discrepancy Indication Specs <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection											
	Manifest Reference Number:											
	17b. Alternate Facility (or Generator)						U.S. EPA ID Number					
	Facility's Phone:											
DESIGNATED FACILITY	17c. Signature of Alternate Facility (or Generator)											
	Month Day Year											
	18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in item 17a											
	Printed/Typed Name Steve T. Gelman						Signature 		Month Day Year 10/17/17			

## Shipped Out by Waste Stream

Start Date : 01-JAN-80

End Date : 24-MAY-18

Waste Stream : NR031

EPA ID : ALL

Waste Stream	Container Number	Chemical Nomenclature	DTID	LBS
NR031	BF20130076	AFFF AND WATER	M501693030T411	509
	BF20130077	AFFF AND WATER	M501693030T411	504
	BF20130078	AFFF AND WATER	M501693030T411	504
	BF20130079	AFFF AND WATER	M501693030T411	508
	BF20130146	AFFF AND WATER	M501693120T401	154
	BF20130150	AFFF AND WATER	M501693120T401	478
	BF20130210	AFFF AND WATER	M501693120T401	218
	BF20130462	AFFF AND WATER	M501693120T401	509
	BF20130466	AFFF AND WATER	M501693120T401	503
	BF20130467	AFFF AND WATER	M501693120T401	297
	BF20130461	AFFF AND WATER	M501693120T405	423
	BF20130465	AFFF AND WATER	M501693120T405	117
	BF20130401	USED AFFF	M501693120T482	492
	BF20130402	USED AFFF	M501693120T482	488
	BF20130403	USED AFFF	M501693120T482	370
	BF20130404	USED AFFF	M501693120T482	492
	BF20130149	USED AFFF	M501693120T483	365
	BF20130281	USED AFFF	M501693120T483	475
	BF20130282	USED AFFF	M501693120T483	516
	BF20130283	USED AFFF	M501693120T483	484
	BF20130396	USED AFFF	M501693120T483	519
	BF20130397	USED AFFF	M501693120T483	365
	BF20130398	USED AFFF	M501693120T483	474
	BF20130399	USED AFFF	M501693120T483	524
	BF20130145	AFFF AND WATER	M501693183T435	496
	BF20130147	AFFF AND WATER	M501693183T435	287
	BF20130154	AFFF AND WATER	M501693183T435	417
	BF20130584	AFFF AND WATER	M501693183T435	498
	BF20130585	AFFF AND WATER	M501693183T435	464
	BF20130208	AFFF AND WATER	M501694063T444	273
	BF20130261	AFFF AND WATER	M501694063T444	498
	BF20130262	AFFF AND WATER	M501694063T444	473
	BF20140495	AFFF AND WATER	M501694127T402	477
	BF20140496	AFFF AND WATER	M501694127T402	477
	BF20140498	AFFF AND WATER	M501694127T402	490
	BF20140497	AFFF AND WATER	M501694127T403	489
	BF20140207	AFFF AND WATER	M501694248T463	505
	BF20140216	AFFF AND WATER	M501694248T463	479
	BF20140217	AFFF AND WATER	M501694248T463	480
	BF20140222	AFFF AND WATER	M501694248T463	234
	BF20130870	USED AFFF	M501694330T497	116
	BF20130887	USED AFFF	M501694330T497	492

SENSITIVE BUT UNCLASSIFIED



## Shipped Out by Waste Stream

Start Date : 01-JAN-80

End Date : 24-MAY-18

Waste Stream : NR031

EPA ID : ALL

Waste Stream	Container Number	Chemical Nomenclature	DTID	LBS
NR031	BF20130888	USED AFFF	M501694330T497	498
	BF20130895	USED AFFF	M501694330T497	48
	BF20110011	USED AFFF	M601691035T461	15
	BF20090539	USED AFFF	M601699183T483	77
	BF20140937	AFFF AND WATER	M501695034T430	312
	BF20150700	USED AFFF	M501696137T434	497
	BF20150701	USED AFFF	M501696137T434	475
	BF20150702	USED AFFF	M501696137T434	523
	BF20150703	USED AFFF	M501696137T434	508
	BF20150728	USED AFFF	M501695210T492	16
	BF20151077	USED AFFF	M501696217T445	490
	BF20151078	USED AFFF	M501696217T445	419
	BF20160231	USED AFFF	M501696137T434	471
	BF20160232	USED AFFF	M501696137T434	305
	BF20160233	USED AFFF	M501696137T434	440
	BF20160234	USED AFFF	M501696137T434	450
	BF20160244	USED AFFF	M501696137T434	469
	BF20160245	USED AFFF	M501696137T434	287
	BF20160266	USED AFFF	M501696137T434	176
	BF20160267	USED AFFF	M501696137T434	236
	BF20160268	USED AFFF	M501696137T434	520
	BF20160269	USED AFFF	M501696137T434	538
	BF20160270	USED AFFF	M501696137T434	527
	BF20160271	USED AFFF	M501696137T434	485
	BF20160272	USED AFFF	M501696217T445	248
	BF20160273	USED AFFF	M501696217T445	414
	BF20160670	USED AFFF	M501696217T445	242
	BF20160671	USED AFFF	M501696217T445	311
	BF20160733	USED AFFF	M501696217T445	323
	BF20160734	USED AFFF	M501696217T445	492
Totals by Waste Stream:				28745
Grand Total :				28745

# Shipped Out by Waste Stream

Start Date : 01-JAN-80      End Date : 24-MAY-18      Waste Stream : NR199      EPA ID : ALL

Waste Stream	Container Number	Chemical Nomenclature	DTID	LBS
NR199	BF20110791	ABSORBENTS AND DEBRIS CONTAMINATED WITH AFFF	M601691251T456	131
	BF20161022	ABSORBENTS AND DEBRIS CONTAMINATED WITH AFFF	M501697066T435	214
Totals by Waste Stream:				345
Grand Total :				345

# Shipped Out by Waste Stream

Start Date : 01-JAN-80      End Date : 24-MAY-18      Waste Stream : NR258      EPA ID : ALL

Waste Stream	Container Number	Chemical Nomenclature	DTID	LBS
NR258	BF20111227	ABSORBENT, DEBRIS CONTAMINATED WITH AFFF	M501692003T420	541
	BF20110475	ABSORBENT, DEBRIS CONTAMINATED WITH AFFF	M601691154T490	33
Totals by Waste Stream:				574
Grand Total :				574

## ATTACHMENT E



**Burton Fire District**Station: **81**  
Shifts Or Platoon: **1**

Location: <b>3481 Trask PKY Beaufort (County) SC 29906</b>	Incident Type: <b>142 - Brush or brush-and-grass mixture fire</b>
Lat/Long: <b>N 32° 27' 8.07" W 80° 43' 53.52"</b>	FDID: <b>07303</b> Incident #: <b>2019-450</b> Exposure ID: <b>38024260</b> Exposure #: <b>0</b> Incident Date: <b>02/22/2019</b>
Zone: <b>BH1 - Burton Hill (County)</b> Location Type: <b>1 - Street address</b>	

<b>Report Completed by:</b>	Carneavale, Tony R	<b>ID:</b> 495	<b>Date:</b> 02/23/2019
<b>Report Reviewed by:</b>	Carneavale, Tony R	<b>ID:</b> 495	<b>Date:</b> 02/23/2019
<b>Report Printed by:</b>	Bright, Nichole	<b>ID:</b> 522	<b>Date:</b> 2/28/2019 <b>Time:</b> 14:10

Structure Type:	Property Use: <b>963 - Street or road in commercial area</b>		
Automatic Extinguishment System Present: <input type="checkbox"/>	Detectors Present: <input type="checkbox"/>	Cause of Ignition: <b>Cause undetermined after investigation</b>	
Aid Given or Received: <b>None</b>	Primary action taken: <b>10 - Fire control or extinguishment, other</b>		
<b>Losses</b>	<b>Pre-Incident Values</b>		
Property:	Property:	Civilian Injuries: <b>0</b>	Fire Service Injuries: <b>0</b>
Contents:	Contents:	Civilian Fatalities: <b>0</b>	Fire Service Fatalities: <b>0</b>
Total:	Total:	Total Casualties: <b>0</b>	Total Fire Service Casualties: <b>0</b>
Total # of apparatus on call: <b>2</b>		Total # of personnel on call: <b>4</b>	

<b>NARRATIVE (1)</b>
<p><b>Narrative Title:</b> Brush Fire</p> <p><b>Narrative Author:</b> Lewis, Christopher</p> <p><b>Narrative Date:</b> 02/23/2019 06:40:47</p> <p><b>Narrative Apparatus ID:</b> E81</p> <p><b>Narrative:</b></p> <p>Engine 81, Battalion 81, and Beaufort City Engine 4 were dispatched and responded to a brush fire near the address listed previously in the report.</p> <p>Battalion 81 arrived on scene and a United States Marine Corps Humvee was on scene extinguishing the fire with the assistance of a South Carolina State Trooper. Engine 81 arrived on scene as well.</p> <p>A Beaufort County Deputy Sheriff was on scene, as well as United States Marine Corps Police units.</p> <p>The fire was extinguished as Burton Fire District units arrived on scene by the United States Marine Corps Humvee that was on scene.</p> <p>Beaufort City Engine 4 was cancelled.</p> <p>Engine 81 ensured the fire was fully extinguished.</p> <p>Command was terminated and all Burton Fire District units returned to service and quarters.</p>

Member Making Report (Battalion Chief Tony R Carneavale): \_\_\_\_\_

Incident Reviewer (Battalion Chief Tony R Carneavale): \_\_\_\_\_

## ATTACHMENT F



# Communication Log

By:	<u>Elizabeth Maurer</u>	Date:	<u>May 9, 2018</u>
Talked with:	<u>Chris Vaigneur</u>	Project number:	<u>60563666</u>
From (company):	<u>MCAS Beaufort</u>	Subject:	<u>PFAS Assessment Questionnaire</u>
Phone number:	843-228-6455		In Person Interview Summary

Distribution: \_\_\_\_\_

Mr. Vaigneur is a current employee of MCAS Beaufort and is currently the Environmental Compliance Supervisor. His work includes supervising temporary waste storage and waste disposal on base. AECOM met with Mr. Vaigneur, at the recommendation of Craig Ehde, to conduct an in person interview regarding the use, clean-up and disposal of PFAS containing materials, especially AFFF, at MCAS Beaufort.

Mr. Vaigneur reported that no Teflon coating, or chrome plating shops have operated at MCAS Beaufort. To his knowledge, the only plating activities to occur on site were cadmium plating. The base has one auto-hobby shop, two car washes and two aircraft wash racks. Mr. Vaigneur was unaware of the type of aircraft soap used at the wash racks, and reported that one of the car washes was power wash only. He indicated that there are no active landfills on site. He reported that the base uses Beaufort Jasper water. Mr. Vaigneur stated that almost all storm water drains go to the large storm water pond on the eastern side of the base. He also reported that all oil water separators on base drain to the sanitary sewer.

Mr. Vaigneur indicated that a carbon drum containing treated PFAS contaminated groundwater leaked onto the concrete pad at the waste storage facility. Efforts were made to clean up the water, and the carbon drum was put into an overpack drum for containment.

During the interview, Mr. Vaigneur mentioned that he would provide AFFF spill reports, and storage and disposal records.

In reference to AFFF use, storage and disposal on base, Mr. Vaigneur stated the following:

- Tank 979 holds spent AFFF and AFFF rinsate.
- To his knowledge, AFFF is not used during fire training exercises.

- Mr. Vaigneur stated that if AFFF is captured it is disposed of according to guidance. Previously it was disposed of as non-regulated waste, and the waste was solidified. Currently the waste is incinerated. Current protocol for AFFF waste disposal includes storing 6,000 gallons of waste in AST 979 and disposing of the waste as bulk.
- Containerized AFFF that is currently stored on site will be disposed of under a contract.
- He reported that during a release of AFFF in a hangar, the AFFF goes into sump. A vac truck is used to collect AFFF from the release site to tank 979.



## Communication Log

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By:	<u>Elizabeth Maurer</u>	Date:	<u>May 9, 2018</u>
Talked with:	<u>Craig Ehde</u>	Project number:	<u>60563666</u>
From (company):	<u>MCAS Beaufort</u>	Subject:	<u>PFAS Assessment Questionnaire</u>
Phone number:	<u>843-228-7317</u>		<u>In Person Interview Summary</u>

Distribution: \_\_\_\_\_

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Mr. Ehde is a current employee of MCAS Beaufort and is currently the Installation Restoration/UST Manager. AECOM met with Mr. Ehde to conduct an in person interview regarding the use of PFAS containing materials at MCAS Beaufort.

Based on his knowledge of current and historic site operations, Mr. Ehde reported that no Teflon coating, or chrome plating shops have operated at MCAS Beaufort. To his knowledge, the only plating activities to occur on site were cadmium plating. He indicated that the base has used Beaufort Jasper water since the 1960's and that there are no water supply wells on base. He reported that the fire training pit is not lined. Containment at the current training pit includes concrete and a berm.

In reference to AFFF use on base, Mr. Ehde stated the following:

- He has seen AFFF on the asphalt at the current fire training area, and in retention basins near hangars after a release of AFFF.
- He is not aware of any use of AFFF to prevent fire in the event of a fuel release or during emergency landings.
- He believes that AFFF was probably in the historic water treatment system, and may potentially be in the current sanitary sewer network.
- To his knowledge, AFFF was not used to put out fires during waste burning in historic landfills.
- He believes that most landfills on base were inactive prior to AFFF use on base.
- AFFF was used during a crash response in 2007, but he did not have details about the event.

## Communication Log

By:	<u>Elizabeth Maurer</u>	Date:	<u>May 22 and 24, 2018</u>
Talked with:	<u>Chris Vaigneur</u>	Project number:	<u>60563666</u>
From (company):	<u>MCAS Beaufort</u>	Subject:	<u>PFAS Interview Follow up and</u>
Phone number:	<u>843-228-6455</u>		<u>Documentation Request</u>

Distribution:	<u>AFFF Inventory</u>	<u>AFFF Spill Reports</u>	<u>AFFF Non-bulk and Bulk Disposal Records</u>	<u>MCAS Beaufort General Development Map</u>
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Mr. Vaigneur, the current Environmental Compliance Supervisor at MCAS Beaufort, was contacted by electronic mail to follow-up about records and documents that were discussed during the May 9, 2018 interview with AECOM. AECOM also requested additional information about AFFF releases, storage and disposal. The following files were provided in the correspondence and are provided in Appendices A through D, respectively:

- AFFF storage inventory summarizing the volume and location of AFFF installed in fire suppression systems and trucks, and pure unopened AFFF containers stored in warehouses. The storage inventory includes quantities of AFFF at each location and contact information for the managers of the locations and, if known, the manufacture and manufacture date of the AFFF.
- AFFF spill reports dating back to 2014. The reports include details about the release including date and time, location, personnel involved, description of the release, estimated volume of AFFF released, cause of release and corrective action.
- MCAS Beaufort General Development Map showing the current layout of the base including buildings, runways, roads and water features.
- AFFF waste disposal manifests including manifests for bulk disposal and a summary table for non-bulk disposal. In the email correspondence, Mr. Vaigneur stated that on the non-bulk (i.e. smaller containers <55 gal) record, it is hard to differentiate AFFF waste from other Non-regulated wastes on old manifests since they could be on the same line. The report is an estimate of AFFF waste disposal dating back to 2011, and the wastes included on this report were disposed of as non-regulated waste.

During the interview follow-up correspondence, Mr. Vaigneur reported that the following spills occurred, but he did not have records for them:



- 8/8/2003 – AFFF discharged in response to aircraft emergency (approx. 30 gallons);
- 11/22/2004 – Full system discharge (approx. 6,000 gallons) of AFFF at Hangar 414;
- 7/12/2005 – Full system discharge (approx. 1,100 gallons) of AFFF at Hangar 728; and
- 2015 – Full system discharge (approx. 1,200 gallons) at Hangar 2146.

## Communication Log

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By:	<u>Elizabeth Maurer</u>	Date:	<u>May 23, 2018</u>
Talked with:	<u>Darran Vaughn</u>	Project number:	<u>60563666</u>
From (company):	<u>MCAS Beaufort</u>	Subject:	<u>PFAS Assessment Questionnaire</u>
Phone number:	<u>843-228-7293</u>		

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Distribution: \_\_\_\_\_

Chief Vaughn is a current employee of MCAS Beaufort and is currently the Chief of the Fire Department. Prior to working for the base Fire Department, Chief Vaughn was part of Crash Fire Rescue. AECOM contacted Chief Vaughn, at the recommendation of Craig Ehde, to conduct a telephone interview regarding the use of AFFF at MCAS Beaufort. During the telephone call, Chief Vaughn provided the following information:

- The last time Fire Department used AFFF for training was approximately 4 years ago. When AFFF was used for training it was not contained, it was just washed away with water.
- The fire training area is not lined. It consists of concrete, asphalt and grass.
- All hangars on the flight line have AFFF fire-suppression systems installed, which include an AST for AFFF.
- Chief Vaughn reported that to his knowledge every hangar on the flight line has had a release of AFFF. Releases in hangars have occurred due to fire suppression systems being inadvertently set off, including accidental release due to manual release, guns set off by maintenance, and system malfunction.
- Typical response when AFFF is released in the hangar includes pushing the AFFF out past the floor drains and attempt to contain with a berm. Floor drains in the hangars lead to the oil water separator. Typically NEARO cleans out the drains following a release.
- Maintenance of fire suppression systems is provided by Eagle Fire.
- AFFF equipment/trucks are typically parked in the fire department station and the ARFF station.
- He mentioned that the trucks do leak, sometimes just water from hoses but he says it is likely that the leaks include AFFF.
- The Fire Department tested trucks about 4 years ago in the fire training area, which included the use of AFFF mixed with water.



- Crash Fire Rescue perform wet checks frequently, which includes shooting water from truck hoses. The location of these tests is unknown. In the event that Crash Fire Rescue does a test that involves AFFF, the test is performed at the fire training area.
- ARFF and Fire Department trucks are filled and refilled with AFFF at the stations. AFFF is supplied through a reservoir on top of the truck. AFFF containers are turned upside down and pierced by a fixed blade in the reservoir to open container. There is no secondary containment during resupply.
- In the past, the Fire Department kept the empty AFFF containers in the bunker. He is unsure where they were disposed of when the building was demolished.
- Crash Fire Rescue clean their truck on the concrete in front of the station.
- Prior to demolition of building 595, the Fire Department and Aircraft Rescue and Fire Fighting washed the fire trucks on the front pad. The Fire Department now washes on the wash pad area at the current station.
- When foam was used in a fire response, it was not recorded on fire response records.
- Chief Vaughn reported that AFFF was used during the following events:
  - o Fuel release to prevent ignition in 1996 on the east ramp area;
  - o Fuel release to prevent ignition in 2004 on west ramp area;
  - o Crash response to contain/prevent fire in 1989 Parris Island jet crash;
  - o Fire response in 1989 to contain a tanker truck fire adjacent to the security gate at Laurel Bay;
  - o Crash response to contain/prevent fire in a 2004 jet crash at Compass Rose; and
  - o Crash response to contain/prevent fire in a 1991 jet crash at the end of runway 14.

## Communication Log

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By:	<u>Elizabeth Maurer</u>	Date:	<u>May 23, 2018</u>
Talked with:	<u>CWO3 Theodore Hensley</u>	Project number:	<u>60563666</u>
From (company):	<u>MCAS Beaufort</u>	Subject:	<u>PFAS Assessment Questionnaire</u>
Phone number:	<u></u>		<u></u>
Distribution:	<u></u>	<u></u>	<u></u>

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AECOM contacted Chief Warrant Officer (CWO3) Theodore Hensley via electronic mail (Theodore.Hensley@usmc.mil) to request an interview to complete the PFAS questionnaire. CWO3 Hensley is the current ARFF Officer in Charge (ARFF Fire Chief) at MCAS Beaufort. He declined to be interviewed due to a limited knowledge of the topic, and forwarded the email from AECOM to Master Sergeant (MSgt) David Looney. MSgt Looney is the current ARFF Staff Non-Commissioned Officer in Charge (Assistant ARFF Fire Chief). CWO3 Hensley forwarded MSgt Looney's response to AECOM. MSgt Looney stated that the only use of AFFF he is aware of occurred in 2012 or 2013 during a pit fire evolution in the fire training pit. CWO3 Hensley also stated that he was unaware of any other times AFFF was used.



## Communication Log

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By:	<u>Elizabeth Maurer</u>	Date:	<u>June 21, 2018</u>
Talked with:	<u>Darran Vaughn</u>	Project number:	<u>60563666</u>
From (company):	<u>MCAS Beaufort</u>	Subject:	<u>PFAS Interview Follow Up</u>
Phone number:	<u></u>		<u></u>

Distribution:

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Chief Vaughn, the current Fire Department Chief at MCAS Beaufort, was contacted by electronic mail to request additional information about fixed fire suppression systems in the former jet engine test cell (Building 603), and contact information for personnel with knowledge of hangar construction.

Chief Vaughn reported that the former jet engine test cell (Building 603) was not equipped with an AFFF system. He stated that the newer jet engine test cell has an under the wing system with AFFF capabilities, but he is not sure if AFFF was ever installed in the tanks.

Chief Vaughn provided contact information for Mr. Owen Webb as someone who could provide information about the hangars.

## Communication Log

By:	<u>Elizabeth Maurer</u>	Date:	<u>June 21, 2018</u>
Talked with:	<u>Darran Vaughn</u>	Project number:	<u>60563666</u>
From (company):	<u>MCAS Beaufort</u>	Subject:	<u>PFAS Interview Follow Up</u>
Phone number:	<u></u>		<u></u>
Distribution:	<u></u>	<u></u>	<u></u>

Chief Vaughn, the current Fire Department Chief at MCAS Beaufort, was contacted by electronic mail to request additional information about fire and emergency response at the EOD range.

Chief Vaughn reported that the fire department has responded to several fires on the EOD range. The fires mostly involved grass and wood fires that were caused by detonation of explosives. He stated that no AFFF has been used on the range at any time that he knows of over the last 30 years. He reported that the response plan is for MCAS F&ES to respond and if a magazine is on fire, they will set up a master stream device and flow water onto the bunker. No AFFF is used. He also reported that ARFF will respond in the event that additional manpower is necessary for a larger fire.



## Communication Log

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By:	<u>Elizabeth Maurer</u>	Date:	<u>July 13, 2018</u>
Talked with:	<u>Owen Webb</u>	Project number:	<u>60563666</u>
From (company):	<u>MCAS Beaufort</u>	Subject:	<u>PFAS Assessment Questionnaire</u>
Phone number:	<u>843-228-6705</u>		

Distribution: \_\_\_\_\_

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Mr. Webb is a current employee of MCAS Beaufort and is currently the Public Works Engineering Director. AECOM spoke with Mr. Webb, at the recommendation of Chief Darran Vaughn, to conduct a telephone interview regarding details about the construction, layout and use of the hangars at MCAS Beaufort. Mr. Webb did not have information regarding AFFF releases at the hangar.

Mr. Webb reported the following information:

- Hangar 728 is set to be demolished in next few months and AFFF is stored in the hangar bay.
- Hangar 729 is an active hangar built around 1958. AFFF is stored in the hangar bay, and operational squadron maintenance occurs here.
- Hangar 414 was built in the early 1950's and used to be two separate hangars (Hangar 414 and 415). The two hangars were bridged in the late 1970's and named Hangar 414.
- Hangar 418 is an active hangar built around 1958. The hangar is a double squadron hangar.
- Hangar 594 is an active hangar built around 1958 and is a double squadron hangar.
- Hangar 1084 is an active hangar built in the late 1980's. The hangar was originally used for non-destructive aircraft investigation using an x-ray booth. It currently houses aircraft and operations include maintenance of the aircraft.
- Hangar 1256 is an active hangar built in the early 2000's and operates as the corrosion control facility. Operations include repainting aircraft and repairing damage to composite structure of aircraft.
- Hangar 2145 is the pilot training building and houses flight simulators.
- Hangar 416 was demolished about 3 years ago and Hangar 3060 was built on the site.
- Hangar 1331 was built in the mid-1990's. The building is used as a hush house, but has not been utilized in a while.

- Hanger 2146 was built about 5 years ago and is the F35 squadron hangar.



# Communication Log

By:	<u>Elizabeth Maurer</u>	Date:	<u>July 30, 2018</u>
Talked with:	<u>Troy Ward</u>	Project number:	<u>60563666</u>
From (company):	<u>MCAS Beaufort</u>	Subject:	<u>PFAS Assessment Questionnaire</u>
Phone number:	<u>843-228-7361</u>		

Distribution: \_\_\_\_\_

Mr. Ward is a current employee of MCAS Beaufort and is currently the Townsend Bombing Range Program Manager. AECOM spoke with Mr. Ward, at the recommendation of Chief Darran Vaughn, to conduct a telephone interview regarding details about fire and emergency response activities at Townsend Bombing Range.

Mr. Ward reported that, to his knowledge, AFFF has not been used at Townsend Bombing Range. He stated that they only use high pressure water in their fire response, and that they do not have any crash trucks onsite, only scrubber trucks are kept onsite.

## Communication Log

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By:	<u>Elizabeth Maurer</u>	Date:	<u>February 12, 2019</u>
Talked with:	<u>Walter McCall</u>	Project number:	<u>60563666</u>
From (company):	<u>MCAS Beaufort</u>	Subject:	<u>PFAS Assessment Questionnaire</u>
Phone number:	<u></u>		<u></u>

Distribution:

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Mr. McCall is a current employee of MCAS Beaufort and is currently the Hazardous Materials Manager. He has had this role since September of 2010. AECOM contacted Mr. McCall to conduct a telephone interview because he is the point of contact for the Joint Hazardous Material Minimization Warehouse (Building 1270) which stores small quantities of AFFF in 5-gallon pails.

Mr. McCall stated that Building 1270 has been the Joint Hazardous Minimization Warehouse since 2003 or 2004. He reported that containers of AFFF remain closed for the duration of time that they are stored at Building 1270, and remain unopened through transportation to the place where they will be used. The pails of AFFF are stored on top of pallets. Mr. McCall reported that personnel do daily walkthroughs to inspect all containers stored in the warehouse. He stated that containers are inspected for leaks, bulging, and any other indication that the container is compromised. He has no knowledge of AFFF leaking or spilling in Building 1270.



# Communication Log

By:	<u>Elizabeth Maurer</u>	Date:	<u>February 15, 2019</u>
Talked with:	<u>Scott Craft</u>	Project number:	<u>60563666</u>
From (company):	<u>MCAS Beaufort</u>	Subject:	<u>PFAS Assessment Questionnaire</u>
Phone number:	<u>843-228-7854</u>		

Distribution: \_\_\_\_\_

AECOM attempted to contact Mr. Joe Otterbine, the former lead fire inspector, who was listed as the point of contact for the Pilot Training Building (Building 2145). However, he no longer works at MCAS Beaufort. Mr. Craft is the current Lead Fire Inspector and was interviewed instead.

Mr. Craft was asked for additional information about Building 2145, which is listed as having AFFF in a fixed fire suppression system storage tank in AFFF storage records. Mr. Craft stated that there is no AFFF in the fixed fire suppression system at Building 2145. He also reported that construction of the building was completed in September 2013. Mr. Craft also stated that he was previously part of the CFR team at MCAS Beaufort. He reported that CFR training involved spraying foam onto the grassy area of the current fire training area. He stated that they stopped training with foam around 2000 to 2003, and now use a green dye during training instead of AFFF.

# Communication Log

By:	<u>Elizabeth Maurer</u>	Date:	<u>February 28, 2019</u>
Talked with:	<u>Neil Tisdale and Ryan Dunn</u>	Project number:	<u>60563666</u>
From (company):	<u>MCAS Beaufort</u>	Subject:	<u>Follow up PFAS Interview</u>
Phone number:	843-228-6317/843-228-6055		

Distribution: \_\_\_\_\_

Mr. Tisdale was contacted by electronic mail to request additional information about the oil-water separators (OWS) at Wash Rack 953 and Wash Rack 959. Mr. Tisdale forwarded the electronic mail to Mr. Ryan Dunn for confirmation. Mr. Tisdale is the Utilities Director at MCAS Beaufort and Mr. Dunn is an environmental engineer at MCAS Beaufort.

AECOM asked Mr. Tisdale if the OWSs at Wash Racks 953 and 959 are only connected to the wash racks, and if there was any potential for them to receive material/runoff from the hangars and surrounding area. In his response, Mr. Tisdale stated that he believes the OWS at Wash Racks 953 and 959 are only hooked up to the wash racks. Mr. Dunn confirmed this information. Mr. Dunn also stated that each OWS has an on/off valve that prevents releases of storm water into the sanitary sewer when not in use. The OWS valves remain closed when the wash racks are not in use.



## Communication Log

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By:	<u>Elizabeth Maurer</u>	Date:	<u>February 28, 2019</u>
Talked with:	<u>Chris Vaigneur</u>	Project number:	<u>60563666</u>
From (company):	<u>MCAS Beaufort</u>	Subject:	<u>PFAS Interview Follow up</u>
Phone number:	<u>843-228-6455</u>		

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Distribution: \_\_\_\_\_

Mr. Vaigneur, the current Environmental Compliance Supervisor at MCAS Beaufort, was contacted by electronic mail to follow-up about information gained during the interview with Mr. Craft and to request additional information about AFFF storage on site.

During Mr. Craft's interview on February 15, 2019 he stated that the fixed fire suppression system in the pilot training building (Building 2145) is not equipped with AFFF. However, in the AFFF inventory records provided by Mr. Vaigneur on May 22, 2018, Building 2145 is listed as having AFFF in an above ground storage tank. In the electronic mail correspondence exchanged on February 28, 2019, Mr. Vaigneur confirmed that Building 2145 does not have an AST with AFFF, and it's inclusion on the AFFF inventory is an error. The AFFF inventory should have included Building 2146 (VMFAT-501/F-35 Hangar), not Building 2145.

Mr. Vaigneur provided information about the filling and emptying practices at Hazardous Waste Storage Tank 979. Tank 979 is loaded and unloaded using a vacuum truck. The truck and tank are connected via hose and cam lock fittings. The vacuum truck has spill supplies onboard and portable secondary containment is placed under the hose connections during filling and emptying. Mr. Vaigneur stated that there are no reported spills in this area.

Mr. Vaigneur provided additional information about the twin agent units (TAUs) that are used for fire suppression. TAUs are portable units with both AFFF and PKP fire suppression agents. There are five TAUs at MCAS Beaufort: three are stationed at Building 1171 (MWSD-31 Fuels); and two are stationed at Building 1313 (ARFF Station).

Mr. Vaigneur provided additional information about AFFF storage at the Hazardous Waste Storage Facility. He reported that AFFF has been stored in the Non-Regulated Waste Storage Area (Building 1205). He stated that Pure AFFF, AFFF rinsate and AFFF contaminated solids have been, and currently are, stored at the facility. Mr. Vaigneur stated that there are no reported spills in this area.

# Communication Log

By:	<u>Elizabeth Maurer</u>	Date:	<u>March 1, 2019</u>
Talked with:	<u>Craig Ehde</u>	Project number:	<u>60563666</u>
From (company):	<u>MCAS Beaufort</u>	Subject:	<u>Email Correspondence</u>
Phone number:	<u>843-228-7313</u>		<u>Regarding 2019 AFFF Release</u>

Distribution: \_\_\_\_\_

Mr. Ehde, the current Installation Restoration/UST Manager at MCAS Beaufort, contacted AECOM via electronic mail to report that an additional on-base release of AFFF occurred during a fire response. The electronic mail included an electronic mail correspondence dated March 1, 2019 from Mr. Vaigneur to Mr. Ehde, a photo of the fire response area, and a file containing the coordinates of the fire response area. The correspondence from Mr. Vaigneur to Mr. Ehde stated that ARFF Marines were returning from training at Parris Island and came across a Beaufort County deputy fighting a brush fire using a fire extinguisher. Mr. Vaigneur reports that ARFF Marines used a twin agent unit mounted to the Humvee to put out the fire, and they estimate that 20 gallons of old MILSPEC AFFF/PAK were used. Mr. Vaigneur provided the contact information for ARFF if further details were necessary.



# Communication Log

By:	<u>Elizabeth Maurer</u>	Date:	<u>March 5, 2019</u>
Talked with:	<u>Staff Sergeant Matthew Tinsley</u>	Project number:	<u>60563666</u>
From (company):	<u>MCAS Beaufort</u>	Subject:	<u>Interview Regarding the 2019</u>
Phone number:	<u>843-228-7395</u>		<u>AFFF Release</u>

Distribution: \_\_\_\_\_

Following the receipt of Mr. Ehde's information about the February 2019 AFFF release, AECOM contacted ARFF to gather additional details about the incident. Staff Sergeant Matthew Tinsley, the current ARFF Admin Chief at MCAS Beaufort, is the person who oversees the crew that responded to the fire, but was not present at the time of the incident. Staff Sergeant Tinsley confirmed that the information provided in the email from Mr. Ehde was correct. Staff Sergeant Tinsley stated that he could provide the fire response narrative that was prepared for the incident, and emailed the narrative to AECOM on March 5, 2019.

The fire response narrative was prepared by Burton Fire District Station 81. The incident took place at 3481 Trask Parkway, Beaufort, South Carolina 29906 (N 32° 27' 8.07", W 80° 43' 53.52") on February 22, 2019, at approximately 14:10. The incident was a brush fire and the cause of ignition was undetermined after investigation. The fire response narrative states that Engine 81, Battalion 81 and Beaufort City Engine 4 were dispatched to the brush fire. When Battalion 81 arrived on the scene, an MCAS Humvee was on scene extinguishing the fire with the help of a South Carolina State Trooper. Engine 81 also arrived at the scene. The fire was extinguished by the MCAS Humvee as the Burton Fire District units (Battalion 81 and Engine 81) arrived on the scene. Prior to leaving the scene, Engine 81 ensured that the fire was fully extinguished.

## Communication Log

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By:	<u>Elizabeth Maurer</u>	Date:	<u>March 6, 2019</u>
Talked with:	<u>GySgt Wesley Barker</u>	Project number:	<u>60563666</u>
From (company):	<u>MCAS Beaufort</u>	Subject:	<u>PFAS Assessment Questionnaire</u>
Phone number:	<u>843-228-6289</u>		

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Distribution: \_\_\_\_\_

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AECOM made attempts via telephone and electronic mail to contact Sergeant Timothy Sunday, who was listed as the point of contact for Buildings 262 and 612. Both buildings are listed as storage locations for 5-gallon pails of AFFF. AECOM spoke with Gunnery Sergeant (GySgt) Wesley Barker via telephone who stated that Sergeant Sunday retired approximately one year ago and was replaced by Sergeant Cornejo, who is currently on leave. GySgt Barker is a current employee of MCAS Beaufort and is currently the Material Chief for ARFF. He stated that he was knowledgeable of the storage locations and AFFF use as it is related to ARFF operations.

GySgt Barker provided additional information about the storage practices at Buildings 262 and 612. He reported that containers of AFFF remain closed for the duration of time that they are stored at Buildings 262 and 612, and remain unopened through transportation to the place where they will be used. The pails of AFFF are stored on top of pallets. GySgt Barker reported that personnel are in the buildings daily and regularly inspect the area. He has no knowledge of AFFF leaking or spilling in Buildings 262 and 612.

GySgt Barker reported that to his knowledge the only use of AFFF was during an off-base F-35 incident in September 2018. He stated that the incident was a crash response and that they reported the use of AFFF through the appropriate channels, including NREAO.

GySgt Barker stated that ARFF trucks are resupplied with AFFF at the training area. Trucks are resupplied through a reservoir on top of the truck. AFFF containers are turned upside down and pierced by a fixed blade in the reservoir to open the AFFF container. Trucks are parked at the ARFF station when not in use, and the trucks are washed at the ARFF station. GySgt Barker did not have any additional information to provide about AFFF use, storage or releases.



## Communication Log

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By:	<u>Elizabeth Maurer</u>	Date:	<u>March 13, 2019</u>
Talked with:	<u>Customer Service (Pam Flash)</u>	Project number:	<u>60563666</u>
From (company):	<u>BJWSA</u>	Subject:	<u>Water Supply Well Inventory</u>
Phone number:	<u>843-987-9200</u>		<u></u>

Distribution:

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AECOM contacted Beaufort Jasper Water and Sewer Authority (BJWSA) customer service to verify that addresses with a water supply well on the property had an active water account. BJWSA confirmed that the following properties located in Beaufort, South Carolina have active water accounts:

- All properties on Grays Hills Acres Road;
- 2749 Trask Parkway;
- all properties on Salt Creek Drive;
- all properties on Craig Lane;
- all properties on Chris Lane;
- all properties on Shannon Lane;
- all properties on Sandhill Drive;
- all properties on Tammy Lane;
- all properties on Eastern Road; and
- all properties on Ice House Road.

## Communication Log

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By:	<u>Elizabeth Maurer</u>	Date:	<u>March 15, 2019</u>
Talked with:	<u>Sergeant Alexander</u>	Project number:	<u>60563666</u>
From (company):	<u>MCAS Beaufort</u>	Subject:	<u>PFAS Assessment Questionnaire</u>
Phone number:	<u>843-228-9043</u>		<u></u>

Distribution:

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Sergeant (Sgt) Alexander is a current MCAS Beaufort employee and is currently the Safety/Environmental Representative for the EOD Range. AECOM contacted Sgt. Alexander at the recommendation of the MCAS Beaufort communications office. Sgt Alexander was asked about fire and emergency response at the EOD range.

Sgt Alexander reported that the fires at the EOD Range mostly involve grass and wood fires that were caused by detonation of explosives. He stated that, to his knowledge, no AFFF has been used on the EOD range. He reported that the response plan is for MCAS F&ES to respond and if a magazine is on fire, they will set up a master stream device and flow water onto the bunker. No AFFF is used. He also reported that the EOD Range goes over the fire response with the Fire Department to maintain a consistent response, and he stated that the Fire Chief explicitly stated that no AFFF should be used in any fire response at the EOD Range.